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CANADIAN GEOGRAPHICAL JOURNAL

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CONTENTS

FEBRUARY, 1955 ✦ VOLUME L ✦ NUMBER 2

COVER SUBJECT:—*On the slopes of Val Morin, Que.*
C.P.R. photograph

	Page
REFORESTATION IN ONTARIO—1955 *by G. H. BAYLY*	44
IN THE LAURENTIANS	62
THE SEALS OF THE PRIBILOFS *by F. H. WOODING*	70
OLD MORLEY CHURCH *by JOHN LAURIE*	81
TEXTBOOKS ON THE GEOGRAPHY OF CANADA *by J. LEWIS ROBINSON*	V
EDITOR'S NOTE-BOOK	VIII
THE TRAVEL CORNER	IX

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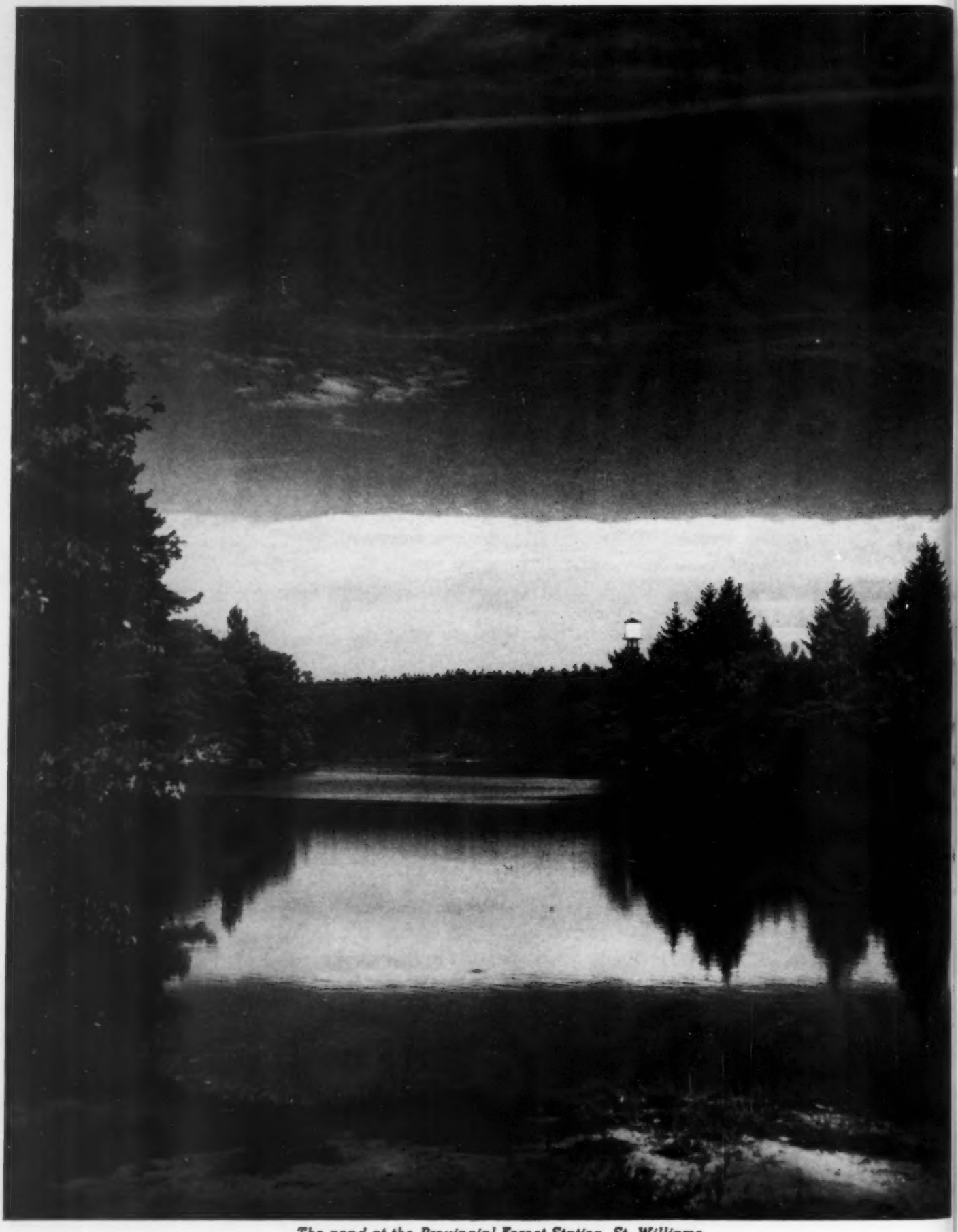


The pond at the Provincial Forest Station, St. Williams.

Reforestation in Ontario—1955

by G. H. BAYLY[1]

SOME FIVE YEARS ago a comprehensive story of reforestation in this province, from its beginning, was prepared by Dr. E. J. Zavitz, the first forester in Ontario[2]. At that time he was able to describe from actual experience the initiation of the program in 1905 with his appointment to the staff of the Ontario Agricultural College at Guelph. At the same time the policy was begun of providing free trees and advice to landowners in the reclaiming of waste lands and restocking of woodlots.

Tracing the work through its pioneer years, the distribution of trees started with a mere trickle of 10,000 in 1905. This grew steadily with the establishment of nurseries at St. Williams in 1908, Midhurst and Orono in 1922, and Kemptville and Fort William in 1946, swelling the flow to 24 million in 1954, almost half a century later.

Realization of the magnitude of the task in Old Ontario resulted in the legislation under which municipalities could acquire waste lands and place the burden of reforestation in the hands of the provincial government through co-operative agreements. More recent legislation has provided for the formation of River Valley Conservation Authorities. These may, like municipalities, place their forest areas under the management of the province.

From the initial thousand acre forest established in Simcoe County in 1922 municipally and authority owned forests have grown to over 100 thousand acres extending from the Bruce Peninsula on the west to the thriving pine forests in Prescott and Russell Counties in the east. (See chart, page 52).

In recent years Northern Ontario has adopted more intensive forest management practices. It is now recognized that tree planting is the only answer if many areas denuded through cutting or fire are to be reclaimed to forests. More northern nurseries are required to meet demands for the type of nursery stock which will thrive on these lands. In 1954 small trial nursery sites were selected near North Bay and Englehart.

Municipal and River Valley Authority Forests

Under the terms of legislation of what is now known as The Trees Act (R.S.O. 1950) any municipality may purchase the land, carry on development and management of these areas, and either enter into an agreement with the Crown, or carry out the planting and management of the forest without the agreement. All by-laws pertaining to the purchase, management or subsequent sale of such lands require the approval of the Crown, as represented by the Minister of Lands and Forests.

The agreement provides that the provincial government will assume the responsibility for re-establishment and care of the forest for a stated period of years (usually fifty in recent agreements). At the end of the agreement period, the municipality may renew the agreement, or it may take over the project by paying to the Crown the cost of the development without interest; revenue received by the province during the agreement period is credited to the project. A third choice open to the municipality is to relinquish title to the land and receive its original purchase price.

During the last three decades thirty-six counties and five townships have purchased 100,000 acres with a view to rehabilitation of lands through tree planting and woodlot management.

Similar agreements cover the development of lands purchased by River Valley Conservation Authorities. Nine Authorities now have purchased almost 20,000 acres for forestry purposes. It should be noted, however, that water and soil conservation and other factors contributing to community welfare play a large part in the selection of these forest areas and their subsequent management.

Since the objective is that these lands will be developed under permanent forest management, it may be of interest to record how the Department of Lands and Forests approaches the task. Administration of all forestry matters is carried on through district headquarters located throughout the province. In addition

[1] In the provision of material for this article assistance is gratefully acknowledged to W. R. Grinnell, Supervisor of Crown Land Planting; J. M. Halpenny, Supervisor of Tree Production; and to J. C. Jackson, Supervisor of Extension, and C. W. Dill for their help in editing the text and selecting photographs.

[2] Dr. Zavitz whose article "Reforestation in Ontario" appeared in the Canadian Geographic in April 1947 is now consultant in forestry to the Division of Reforestation, Department of Lands and Forests.

In the beginning forests covered the land.

to advising private landowners, the zone foresters attached to district offices carry out the supervision of work on municipal and authority forests. From aerial photographs they prepare maps showing proposed roads, fireguards and plantable areas, as well as the existing woodlands. Planting plans are made with emphasis placed on the choice of species suited to the conditions of soil, light and moisture under which they must grow. The trees must thrive if they are to yield wood of optimum quality and maximum quantity.

Summaries by species and quantity of trees required for each municipal or authority forest are submitted to Toronto office by the field offices each fall so that delivery can be arranged for the following spring. An attempt is also made to estimate future requirements, so that the nursery production can be geared to the needs of the program.

Seed Production

It is noteworthy that over 95 per cent of the nursery stock now being distributed is of the cone bearing species. To facilitate the return of planting stock to its place of seed origin, the province has been divided into seven seed zones. To assure a supply of seed of good quality, foresters in the districts are locating good natural stands which will serve as a source of seed. Close liaison is maintained with the Division of Forest Research; in co-operation with research foresters special plantations, known as seed orchards, are being set out to produce seed of desirable new strains. Scions from mature trees of good form are grafted to young vigorous trees which are then set out in plantations.

As seed of most coniferous trees matures in the autumn, a reconnaissance of the possible crop is carried out during the summer, after which the collection of the quantity of seed required from each locality is arranged. Since cones open and scatter the seed soon after ripening, the collecting program must be co-ordinated with the local season.

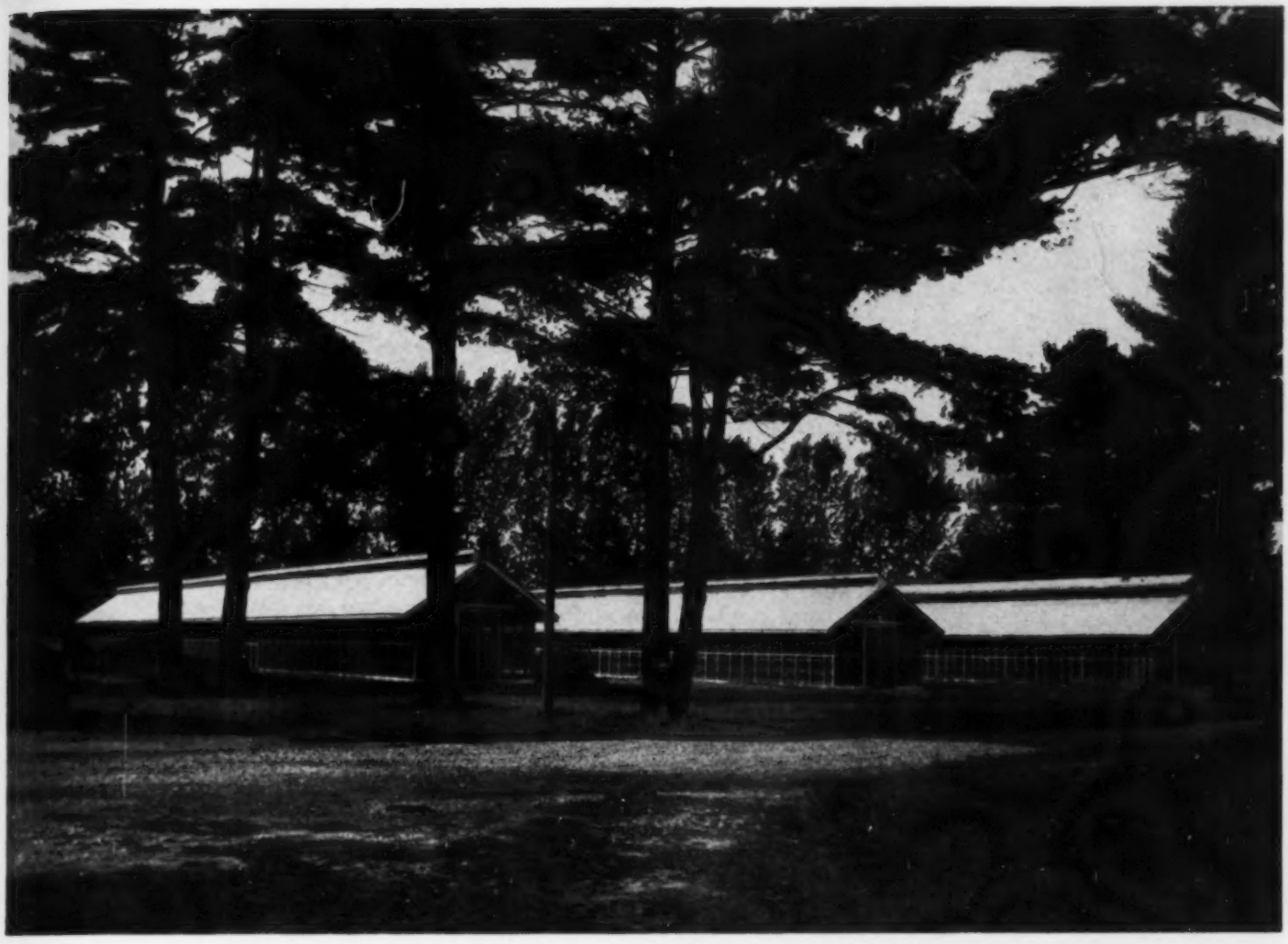
Cones collected in the districts are shipped direct to the Seed Plant at Angus, near Barrie. Usually they are partially dried before shipment. At Angus the drying process is continued on screened drying racks where the seed is protected from moisture and rodents.

Extraction of the seed from the cones is carried on during the winter at the plant, using machinery specially designed for the purpose. In brief, by the application of heat and moisture followed by shaking, natural conditions of sun, rain and wind are simulated. Following extraction the seed is cleaned, and dried to its proper moisture content for storage in wax-sealed glass containers. A temperature of 36° to 40° F. is maintained in the storage vault.

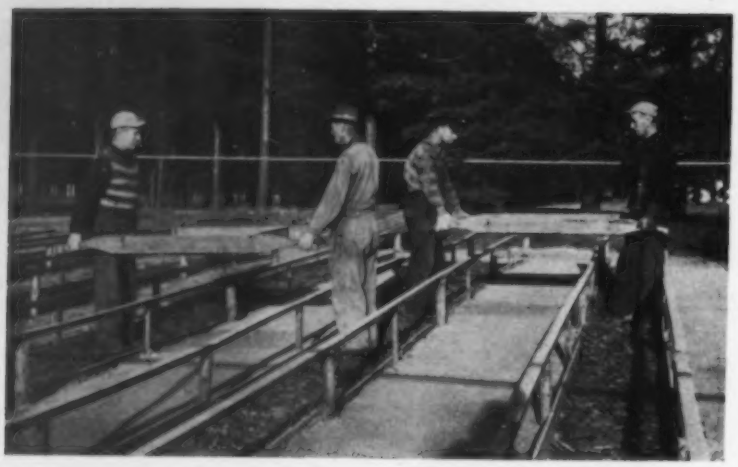
A reserve supply of seed is necessary since good seed crops of some species may not occur for several years. Germination tests are made in a greenhouse by placing seeds on moist blotting paper or sand. The information obtained from these tests is used by the nurseryman as a guide to the number of trees that he may expect to produce from any specific shipment of seed.

Right: The cones are loosely spread on trays to permit free circulation of air.

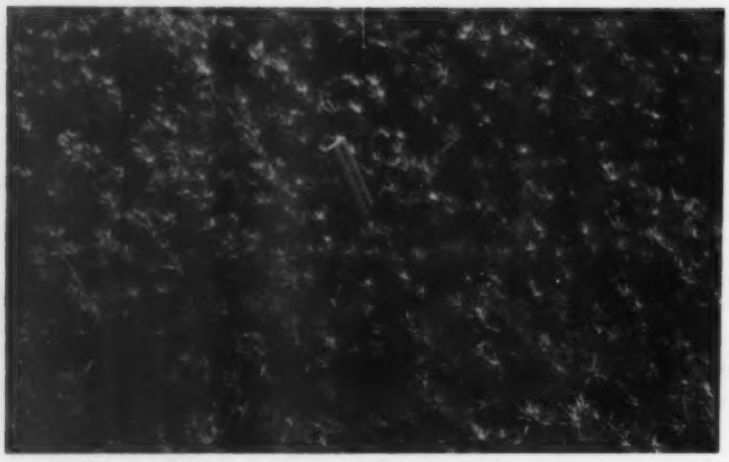
Extreme right: Scion from desirable mature white pine is grafted on a vigorous young seedling.



These screened cone drying sheds at the Angus Seed Plant provide ample ventilation and protection from birds and rodents.



At the nurseries the seed is sown in seed beds and covered with a light layer of sifted sand.
(St. Williams)



First season white pine seedlings about 2" high.
(Midhurst)

Lifting two-year spruce seedlings for transplanting. Overhead piping is used for irrigation. Rolled up shades in background are spread when needed.

Light-weight portable sprayers and piping are also used to supply moisture as required.

Nurseries

Factual data as to past distribution and anticipated production from the provincial nurseries are portrayed on the chart on page 52.

Three native pines, red, white and jack, along with Scotch pine, make up 60 per cent of proposed production, while two native spruces, white and black, and one exotic, Norway spruce, account for 35 per cent. Miscellaneous conifers such as white cedar and larch amount to 3 per cent, bringing the planned production of conifers to 98 per cent of the total. Hardwood species now grown are mainly red oak, poplar, silver maple, white ash and black locust; these account for the other 2 per cent of production. Survival studies of hardwood planting indicated a low percentage of satisfactory plantations and suggested that nursery production and planting of many hardwood species should be curtailed.

Well drained sandy loam soils, adjacent to ample supplies of water, are prime requisites for nursery production of coniferous species. Shipping facilities and availability of labour are two other factors which have been significant in the choice of nursery locations.

The production of tree seedlings has much in common with gardening or farming. Presupposing a suitable soil, moisture, sunlight and wind must be controlled carefully. Portable light-weight piping and large-volume sprinklers have simplified irrigation in recent years, but when the small plants appear above the ground great care must be exercised to avoid "damping-off" disease in humid hot weather, and a measure of shade must be provided to prevent scorching by the hot summer sun. Excellent dense windbreaks of spruce and white cedar have been developed at the older nurseries to reduce evaporation and afford protection from strong winds.

Seed beds are usually four feet wide and thirty feet long. Seed may be sown in drills or broadcast in the late fall or early spring; in the latter method a light layer of sandy soil is applied with a sifter.

Every effort is made to eliminate weeds through soil cultivation prior to seeding. Chemical sprays recently developed have

Three self-propelled mechanical transplanters with six men can line out 70,000 seedlings per day.

simplified the problem of controlling weeds on the nursery.

For many years it was common practice to grow seedlings for two years in seed beds, then place them in transplant lines for an additional one or two years to ensure development of an adequate root system. Through reducing the density of the beds, and by root pruning, it has been found possible to produce suitable stock of some species for planting out in either two or three years without transplanting. Research projects are being undertaken to find out if similar practices can be used for all species, since the advantages are obvious. The aim is to produce a stocky plant with a good root system and neither a spindly nor a large top.

Machines for transplanting have reduced the labour and expense of this operation. For example, using the planting board the output per man-day would be 2,500 trees, as compared to 12,500 per man-day with a modern transplanter.

Most nursery stock is dug in the spring as soon as the frost is out of the ground. Cull trees are discarded and suitable stock is tied in bundles of twenty-five, ready for shipment. The roots of the trees are kept moist at all times. In shipping this is accomplished by packing the trees in wet sphagnum moss.

Distribution from the nurseries is usually by truck or rail, although many landowners find it more convenient to collect their trees at the nursery to avoid possible damage that may result from delays in transportation.

Sixty per cent of the annual production is furnished to private landowners at the rate of $10 per thousand for all species except Scotch pine, which is $14 per thousand. The remaining 40 per cent is supplied to government planting projects throughout the province. Demand exceeds supply despite expanding production. However, with increasing mechanization of nursery practice and establishment of additional nurseries, a sustained effort is being made to produce ample stock of good quality of the desired species. The new frontier of reforestation is in Northern Ontario. Because of this, major expansion in tree production will be on sites located in that part of the province.

Transplant compartment, sheltered from drying winds by spruce windbreaks, contains three-year-old red pine and white spruce. A 4-acre compartment holds about 800,000 trees.

Power-driven sprayers apply weed killing chemicals in a fine mist that will not harm the trees.

Seed Bed Area: Seed is sown in late fall or early spring in specially prepared beds. After two years, seedlings are transplanted.

New Transplant Area: To meet increased demand for nursery stock, additional area was acquired in which seedlings can be transplanted to develop a better root system.

Wilmot Creek: serves as a water supply for irrigating seed beds and transplants during the summer.

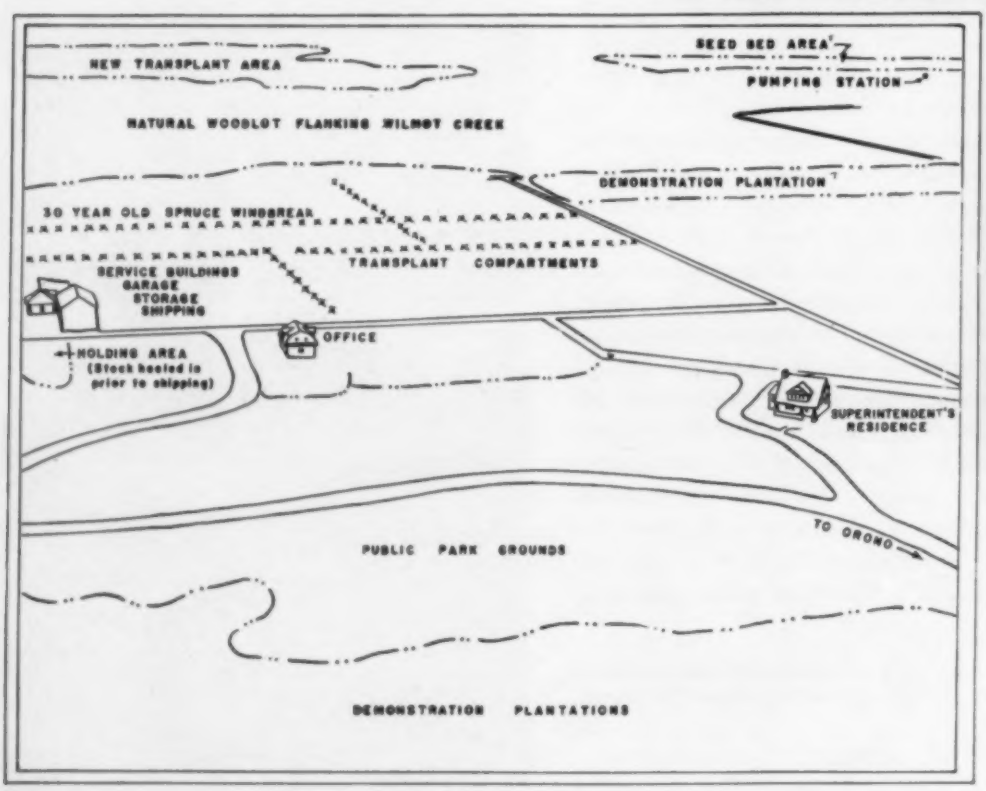
30-Year-Old Spruce Windbreak: Compartments and seed beds are protected from strong winds by evergreen windbreaks.

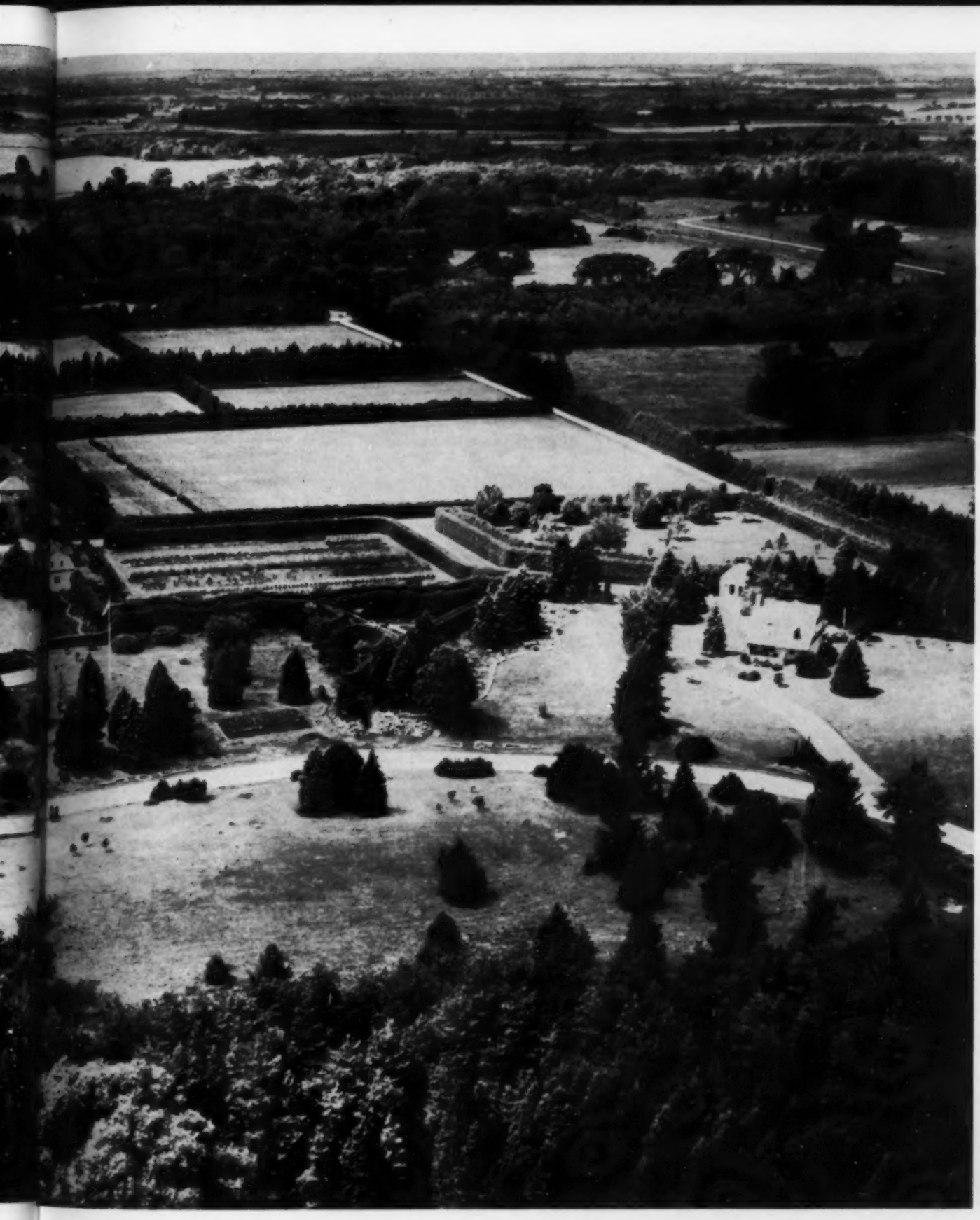
Service Buildings Include: Garage — for storage and maintenance of trucks and other equipment. Shipping Barn — where stock is packed in crates with sphagnum moss for safe shipment.

Holding Area: Quantities of nursery stock lifted from compartments are heeled in adjacent to shipping barn to facilitate packing on short notice.

Office for administration of nursery operations: Allotment of trees to applicants is made in Toronto office during the winter; orders are filled at each nursery as per nursery orders issued from head office.

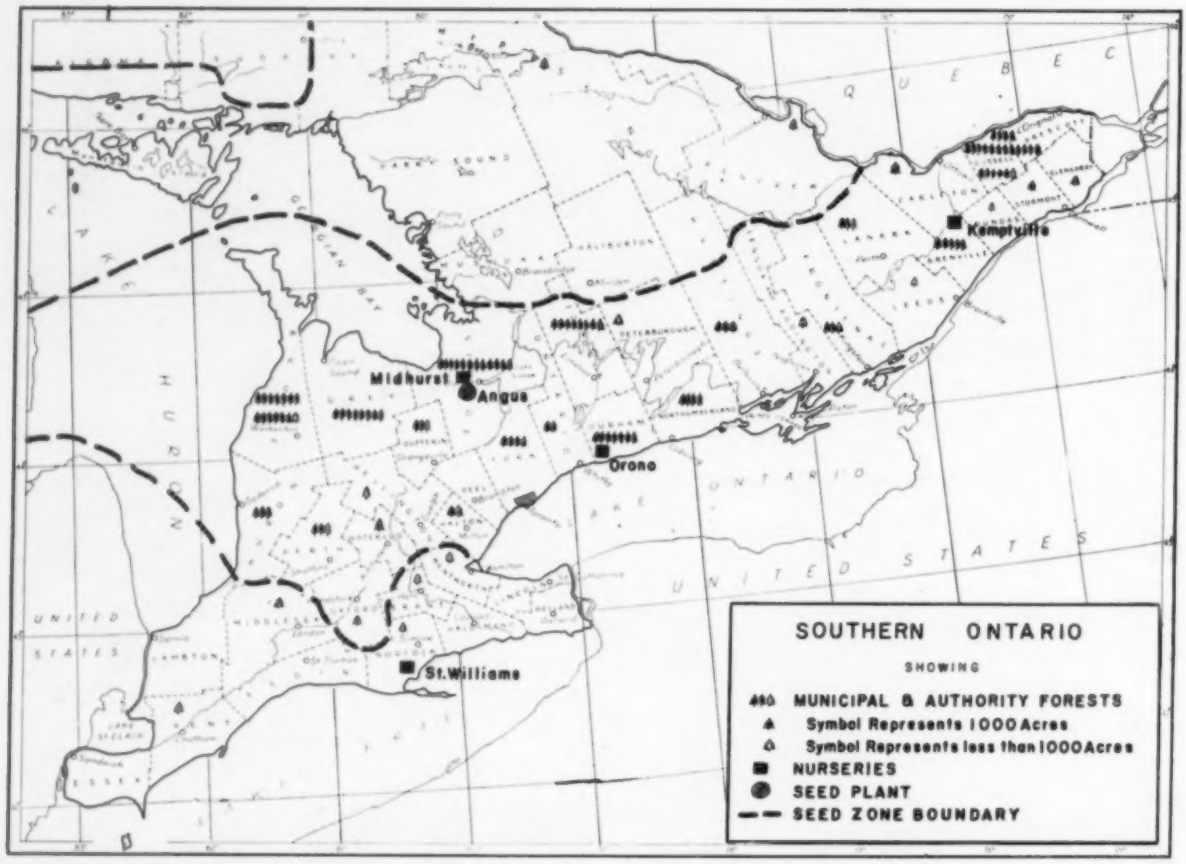
Demonstration Plantations: Visitors to the nursery can observe the development and care of plantations of various species and ages.





THE PROVINCIAL FOREST TREE NURSERY AT ORONO, ONTARIO

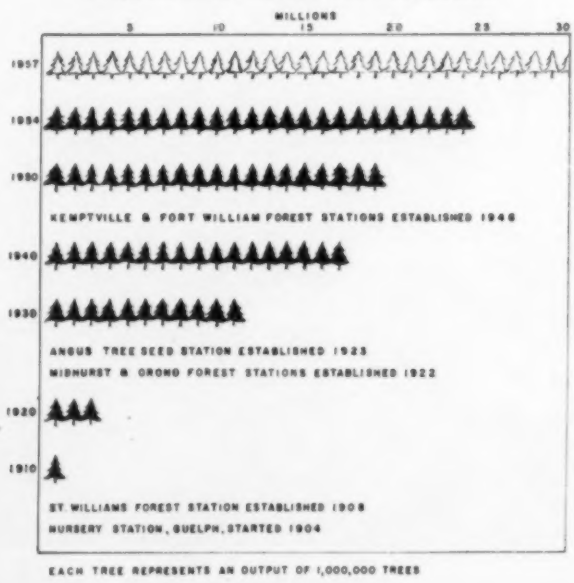
The Superintendent's residence appears on the right, with the office and other headquarters buildings on the left. Seed bed and transplant compartments are protected by windbreaks; plantations along with the natural woodland provide demonstrations of forestry practice for the visiting public. A stream flowing through the woods provides an ample water supply for irrigation as required.



Mention should also be made of co-operation with the Department of Highways in the provision of special stock for roadside planting. The Department of Lands and Forests assumed this responsibility in 1954.

Co-operative plans for the production of nursery stock at provincially operated penal institutions are also being developed.

Progress in Nursery Stock Production



Much of the land cleared was not fit for farming. The accumulated fertility of centuries soon was gone and the settlers moved on.

The settlers cut and burned the trees to clear land for farming and the fires often ran wild.

Planting

Best survival under all conditions has been obtained by planting trees early in the spring as soon as the frost is out of the ground. However, on light sandy soils where a protective snow cover may be anticipated, fall planting may be successful. In recent years approximately four and one half million trees have been planted annually on municipal and authority forests. Every attempt has been made to reforest the open land as soon as possible after the properties were acquired. Actual planting is supervised by a foreman; in the larger forests he is usually the resident caretaker.

On hillsides, rocky outcroppings, or in underplanting where a plow cannot be used, spot planting has been done by hand. Where the sod is heavy and offers severe competition for moisture, it must be removed for a sufficient distance around the tree to give relief from smothering for the first two years. Previous to the development of planting machines, the common practice was to plow shallow furrows and with a spade or long handled shovel plant the tree in the bottom of the furrow. Trees are carried along the planting lines in pails containing sufficient water or wet moss to assure that the roots are not dried out by sun or wind. The usual practice in hand planting has been for two men to work together as a team.

Where the physical nature of the land permitted, tractor-drawn planting machines have been used. Under ideal conditions three men operating a machine can plant up to 1,000 trees per hour. The machine consists of a trencher to open a narrow slit in the soil into which the tree roots are placed by the operator. The operator rides behind the trencher on a dolly, the wheels of which firm the soil around the tree roots. In front of the trencher is a rolling coulter which cuts the sod and offers a measure of protection to the trencher. Where a furrow is needed, a double mould-board plow is usually used to throw back the sod; the trencher operates in the bottom of the resulting furrow. Both draw-bar and 3-point hydraulic lift models are used. Several designs of trenchers are used but the most satisfactory type has a small flare at the base which lifts the soil slightly beside the trencher, thus loosening the soil for better packing around the tree roots.

On brush-covered lands, heavy crawler tractors with a bulldozer blade in front are used. Low lying areas bearing scrub growth can be readily planted with this equipment. Planting machines that do not plow a furrow are normally used for this work as a furrow is difficult to make in land interlaced with roots. A furrow, in forest conditions, would serve no useful purpose.

Nursery stock is shipped in wooden crates with the roots packed in moist sphagnum moss. Recently, experiments have been carried out with bales of 1,000 trees packed in burlap. The bales are relatively light and can be handled more easily than crates. If this method proves satisfactory transportation costs should be reduced.

On arrival at the planting site the trees are stored so that the roots will not dry out, nor will there be danger from excessive heating. Where it is possible to plant the trees within one or two days, and they can be stored temporarily in a shaded, cool location, seedlings can be supplied to crews directly from the crates or bales.

When stock must be held for longer periods, the stock is piled in circular mounds with the roots to the centre; successive layers and the central core are insulated with well-soaked sphagnum moss. The piles, which somewhat resemble a beehive in shape, should not be more than three feet high to ensure proper circulation of air.

An alternative method for holding stock is "heeling-in". The turf or sod is removed and

The farmer is plowing furrows six feet apart along the slope in preparation for planting.
(Durham County)

the bundles of trees are laid in a shallow V shaped trench. The soil is replaced and compacted, covering the roots but not the tops of the trees. Where large numbers of trees are involved, and the soil is light, heeling-in can be done by plowing furrows with the soil from each succeeding furrow covering the roots of the trees laid in the preceding one. A fire pump is often used to keep the heeling-in grounds moist.

Carelessness in handling planting stock before planting is a serious matter; not only is the labour which went into its production wasted but subsequent handling in planting is a complete loss.

In planting, the aim is to place the small tree in soil where it will not have too much competition from grass and weeds in obtaining moisture. In hand planting the hole dug should be large enough and deep enough to permit the roots ample spread. The replaced earth should be packed so as to exclude air pockets, and the tree should stand at approximately the same level as when it grew in the nursery.

Checks on cost of planting reveal that under current labour conditions machine planting would run from $6 to $12 per acre, while hand planting has been twice as expensive.

Planted areas are subsequently checked for survival. Refilling is not usually necessary unless mortality runs higher than 25 per cent.

Plantations are inspected regularly for insect damage. When heavy infestations occur, attempts are made to control them by biological methods or by the use of chemical sprays. In this connection excellent assistance has been afforded by the staff of the Dominion Department of Agriculture, Science Service.

Thinning

Thinning operations which are currently being carried on in Simcoe, York, and Durham and Northumberland County Forests, demonstrate the importance of opening up pine stands 20 to 30 years after planting. Rate of growth can be observed by examining the width of growth rings. Close spacing in the early years is necessary to encourage height growth. Through mutual shading the lower branches remain small and die soon after the crowns close. By removing a percentage of the poorer trees before growth slows up, wood production can be concentrated on the best quality stems.

Trees should be planted as soon as possible after delivery. Common practice is to "heel-in" the stock in a sheltered location and water it regularly.

Tree planting by machine on Crown Land in Northern Ontario. Trees in the background are jack pine. (Cochrane)

The oldest municipal forests are together yielding approximately 2,000 cords of wood annually. Most present production is small pulpwood. As time goes on it is anticipated that telephone and hydro poles will be saleable, as well as saw log material. These products will yield greater revenue than pulpwood.

A continuous flow of products at regular intervals from thinnings can be anticipated until the trees are mature. Cutting rotations can eventually be set up for each municipal forest, thus in time replacing a waste-land liability with a very important and productive community asset.

Education

Too much emphasis cannot be laid on the importance of proper planning in the establishment of plantations. This is as true of private projects as it is of those carried out on Crown Lands. Thus, as farmers have found consultations with agricultural representatives pay dividends, similar service provided by trained extension foresters is important in choosing the right kind of tree to accomplish the landowner's purpose most effectively. With a view to making it possible for landowners to discuss their forestry problems on the land with an

Pine being planted by machine among low quality poplar. Bulldozer blade helps clear a path. (Pembroke).

Corner: A four-year-old red pine plantation. (Powassan)
Above: Scotch pine planted in the fissures in limestone rock. (Bruce Peninsula)
Left: Pine and poplar planted to control blow sand. (York County)

expert on local conditions, extension foresters are now located at Aylmer, Hespeler, Owen Sound, Stratford, Angus, Maple, Huntsville, Lindsay, Tweed, Napanee, Kemptville, North Bay, Pembroke, Sudbury, Cochrane and Sault Ste. Marie.

Bulletins are available so that those planning shelter-belts, erosion control, reclaiming of waste land, and restocking of woodlots through tree planting may acquaint themselves with the basic principles. Not only is technical help available for the asking in planning planting, but the field staff will mark plantations for thinning or harvesting, and assist in locating suitable markets for woodlot products.

Since the tree crop is one which is often established by one generation and harvested by the next, a sustained program of education in plantation and woodlot management is essential. The maxim that we learn to do by doing may be hackneyed but it has a very real application to reforestation. During the winter months forestry literature for study has been provided to many rural schools. The study reaches its climax in the late winter with a visit from the zone forester, who conducts an oral quiz and describes the prospective field project. During the month of May, against this background of interest, Arbor Day and the visit to a nearby woodlot assume a more vital and lasting significance to teachers and pupils alike. Credit is due to many county councils for tangible encouragement through their sponsoring of school forestry competitions, usually conducted on a township basis. The Ontario Horticultural Association and the Ontario Conservation Association have also offered prizes on a provincial basis. Over 12,000 school children have participated in such projects in the last ten years.

In secondary schools, instruction in farm forestry has been organized through 4-H Forestry Clubs, first begun in 1950. Co-operation of many high school teachers, the Department of Agriculture, and the Zone Foresters has been excellent. Forty-eight contestants participated in the inter-club competition held at Guelph in October 1954.

Development of plantations adjacent to well travelled roads throughout the province has been an important factor in demonstrating the

possibilities of reforestation. Drifting sands threatening roads have been arrested dramatically. Some thirty years ago the Department of Lands and Forests planted areas of five to ten acres of poor land belonging to municipalities. Some of these plantations have now been thinned and pruned and serve as living demonstrations of an actual yield of woodland products. Urban water-works commissions have found tree planting an excellent way to protect town and city water supply sources; Beeton, Hanover, Guelph, Plantagenet, Woodstock and St. Thomas are good examples.

Although the Department does not provide a planting service for private landowners, Conservation Authorities and County and Township Councils, with the help of Zone Foresters, have organized various assistance projects. The degree of assistance ranges all the way from delivering and planting the trees according to specified terms of agreement, to simply providing a planting machine. In the case of lands which by their nature must be planted by hand, some Conservation Authorities have offered a subsidy of ten dollars per acre, payable one year after planting, provided that reasonable survival has been obtained. In all instances, some guarantee must be provided by the landowner that the trees will be given adequate protection.

The growing of Scotch pine for Christmas trees has attracted many landowners. Despite criticism that cutting these trees is not good forestry practice, the fact remains that since only some of the trees will be suitable for sale, a forest cover will have been established. Even if the residual stand does not produce high quality products, it will influence water run-off,

This white pine was planted in 1913. Pruning of dead branches improves lumber quality.
(Photo taken 1954.)

Forests help to regulate stream flow. (Sauble Falls).

and where there are adjacent seed trees it may result in the establishment of such trees as maple, elm, and ash through natural seeding.

The Department of Lands and Forests is co-operating with the Canadian Forestry Association in the Tree Farm Movement. Any landowner who practises sound forestry principles within the standards specified, may have his property certified as a tree farm. The object is to focus attention on the possibilities of making the woodlot a paying part of the farm business.

Improvement of Natural Woodlands

When land is purchased by municipalities and river valley authorities for forestry purposes, it is inevitable that natural woodlands

Thinnings from this twenty-five-year-old pine plantation yield poles and pulpwood. Note the charred stump of an old white pine. (Simcoe County Forest)

Between winter chores this farmer improves his plantations at a profit. About a third of the trees are removed and sold for pulpwood. The growth rate of the remainder is greatly increased.

Fuelwood from tops and defective trees is an important product of the farm woodlot. (Orillia)

Thrifty growing white pine 10 to 12 inches in diameter should be left to grow. There will be little income for many years from this woodlot. (Ganaraska)

should be included. This has occurred to a greater extent in Eastern Ontario counties such as Prescott and Russell, and Leeds and Grenville, than in the forests established earlier in Simcoe, York, Ontario, Durham and Northumberland.

In County and Authority forests the woodlands are cruised and the total volume, as well as the rate of growth and the distribution of age-classes of timber, is determined. From these data the volume of wood that may be harvested each year is calculated as a basis for a plan of periodic cutting that will result in an even distribution of ages.

The local forester, after preparing and carrying out detailed plans of his harvesting operations, must subsequently market the products. Usually the wood is sold in the rough locally, or may be harvested by small mill operators.

In a farm woodlot a systematic plan of removing trees gradually as they mature will yield products both for sale and for use on the farm. Spare-time labour in winter months can be profitably employed removing defective

A practical discussion on log volumes with two farmers in Western Ontario.

Cut or leave? 4-H Forestry Club Members competing in the annual inter-club competition. (Guelph)

trees and making way for natural seeding of desirable species.

Summary

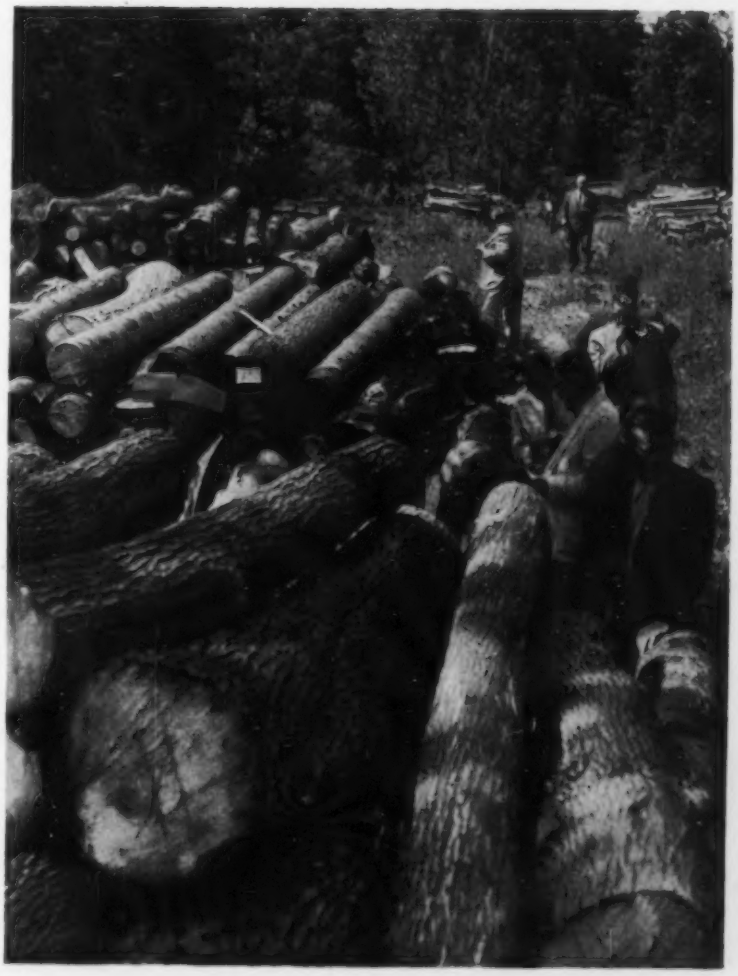
The following is quoted from "Suggestions to the Ontario Legislature for program of Renewable Resources Development" — 1954:

> "It is estimated that the present stands of white and red pine will last for 17 years at even the present small cut. It will have taken less than a century of exploitation to deplete the once great pineries of the Ottawa-Huron region in Ontario to the vanishing point. With the decline of white pine, distress has spread through the sawmilling industry in Ontario at a time when the province is experiencing its greatest industrial prosperity otherwise."

The indirect benefits of reforestation have been stressed for years. The growing shortages of wood supplies now add an increasing note of urgency in both northern and southern parts of the province. Despite great strides made by forest protection agencies in combating fire in Northern Ontario it has become increasingly evident that natural seeding will not guarantee a satisfactory new crop on many lands that have been logged and burned. Establishment of nurseries by pulp and paper companies on Manitoulin Island, and at Heron Bay and Kapuskasing, is tangible evidence that industry considers that planting is necessary.

Departmental reforestation specialists have recently been attached to district offices at Cochrane, North Bay, and Sault Ste. Marie, and surveys of plantable land are being made. Trial nurseries are in progress of establishment at North Bay and Englehart, and, in collaboration with the Research Division, adaptability of species to proposed planting areas is being investigated.

The heritage that we bequeath to succeeding generations will be determined by how wisely or foolishly we use our renewable natural resources. Intelligently applied effort is the price of progress. Not only must we meet the challenge of the northern frontier, but we must also accelerate the rehabilitation of the more accessible potential forest lands throughout Old Ontario.



County Councillors inspect the winter's cut from part of the county forest. (York)

In winter Mont Tremblant becomes a place of enchantment. The southern slope, seen here, is particularly popular with skiers when the weather is cold and blustery.

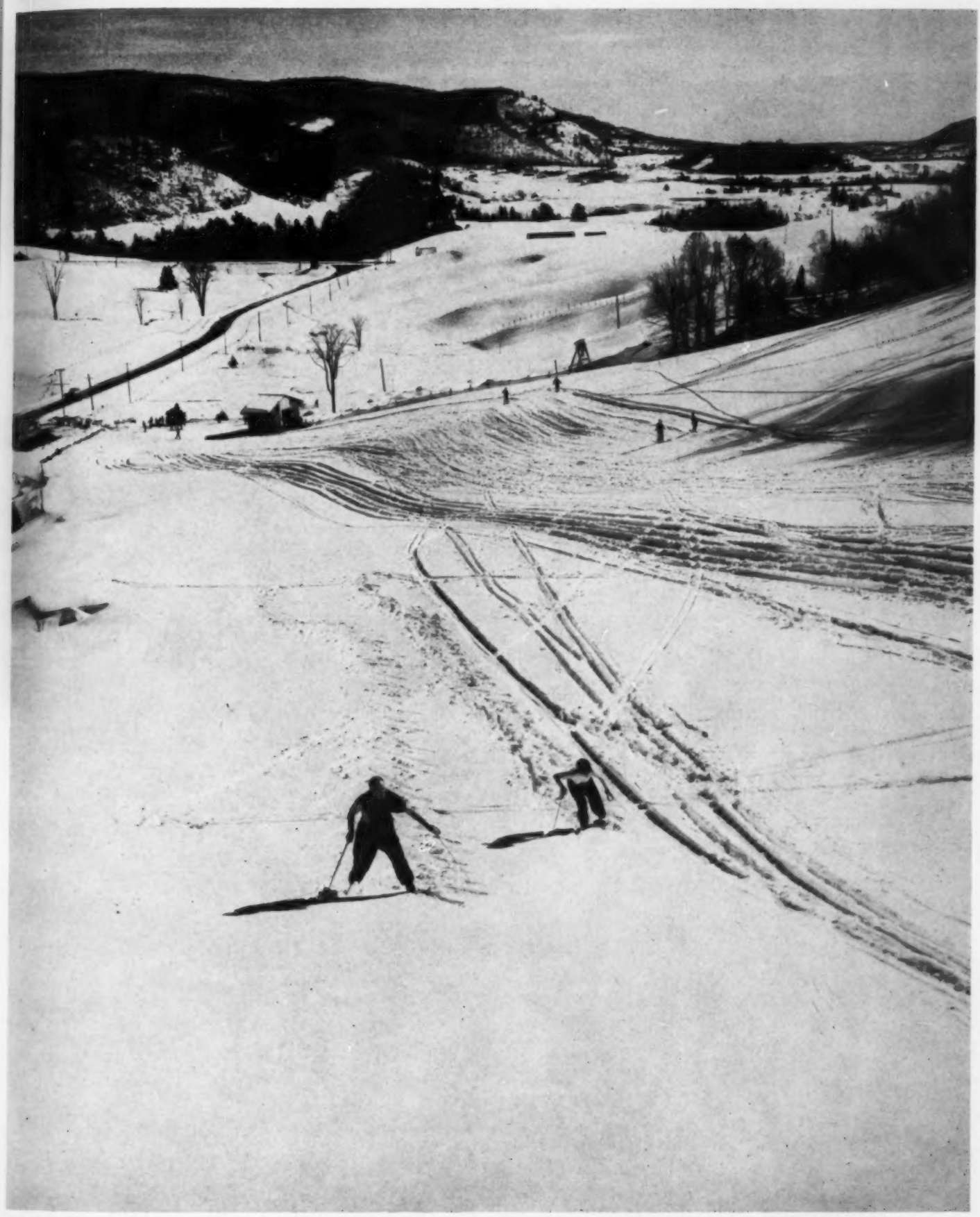
In the Laurentians

Photographs: C.P.R. and Canadian Government Travel Bureau

IN THE Laurentian Mountains of Quebec at Shawbridge, 42 miles north of Montreal, lies the inverted apex of a triangular area of about 600 square miles which extends roughly to Labelle in the northwest and St. Donat in the northeast. This has become the most popular skiing district in Eastern Canada. Its villages have ski schools, ski clubs and shops specializing in equipment for skiers. Its hills are strung with ski-tows and linked by a lacy network of cross-country trails. And from December till March those hills ring with the exultant cry, "track! track!"

The most famous of the trails begins at Labelle and ends about 80 miles southeast at Shawbridge. This, of course, is the Maple Leaf Trail, whose course is marked by maple leaves on a yellow ground. It passes close to some of the best-known skiing resorts in the Laurentians.

Twenty miles south of Labelle stands Mont Tremblant, which rises to a height of 3,100 feet. Its summit, known as Johannsen's Peak, was named after the Norwegian immigrant, Herman Johannsen, who was responsible for construction of the Maple Leaf Trail. The most spectacular skiing in the Laurentians is done at Mont Tremblant and its facilities for skiers are as fine as any in the country. Here in March the Quebec-Kandahar is run. There are two chair ski-lifts and there are T-bar lifts and rope tows and 40 miles of trails



Mont Gabriel near Piedmont is one of the most accessible resorts for weekend skiers from Montreal. It is close to the Maribou and Maple Leaf Trails.

and runs. One of the best known of the trails is the Taschereau which is used for racing. The most unique and luxurious hotel hereabouts is Mont Tremblant Lodge, a replica of a French-Canadian habitant village built by the late Joseph Ryan and now operated by his widow. Also worthy of mention are Manoir Pinoteau and the Tremblant Club.

Four miles south of Mont Tremblant Lodge is Gray Rocks Inn, one of the first year-round resorts to be opened in the Laurentians. It is managed by Mr. Harry Wheeler. The small but pleasant Lac Ouimet Club close by is operated by Mr. Tom Wheeler. St. Jovite, south again some miles from Lac Ouimet, is the gateway to another popular skiing district.

Due east of St. Jovite at about mid-point on the Maple Leaf Trail is Ste. Agathe, one of the older Laurentian resort towns, an erstwhile gathering place of the fashionable. Here the hills rise to a height of 1,200 feet. There are miles of trails and downhill and slalom runs with ski-tows. The Laurentide Inn beside Lac des Sables is close to the junction of several interesting trails and has a ski school. Here let us also mention Jasper-in-Quebec, although it is eighteen miles north of Ste. Agathe near St. Donat: it is one of the most attractive luxury-type hotels in the Laurentians.

East and slightly south of Ste. Agathe near Ste. Marguerite Mont Baldy rises to a height of some 900 feet. Its difficult and fast downhill run is a challenge even to expert skiers. Hill 60 nearby is a favourite of those who do not venture to tackle Baldy. Three of the best hotels in this area are the Alpine Inn, Chalet Cochand, and Domaine D'Esterel.

Ste. Adèle, situated a shade more than halfway between Ste. Agathe and Shawbridge, is another busy resort centre. In the upper town, Ste. Adèle-en-haut, there are two excellent hotels, the Chantecler and Ste. Adèle Lodge.

South of Ste. Adèle at Piedmont one finds many attractive ski chalets, small inns and lodges. If we must select one to mention, it will have to be the Mont Gabriel Club, which has excellent skiing facilities, a school for skiers and luxurious accommodation. There are many trails including the narrow, difficult downhill run known as Tamarack Trail, Herb's Slope for less expert skiers, and Ober-Gurgl for novices.

Near the end of the Maple Leaf Trail at the picturesque village of St. Sauveur at least five skiing clubs have their headquarters. The district is a great favourite of weekend skiers from Montreal. There are four ski-tows here, and between Hills 70 and 71 there is an Alpine T-bar lift. The village and its environs cater to the young; consequently, prices of rooms are reasonable.

This quartet of priests is enjoying an outing near Ste. Agathe.

An idyllic scene near Ste. Marguerite. In the background is Hill 60, a favourite of skiers in the district.

One of the more attractive hotels in the Laurentians is the Chantecler at Ste. Adèle-en-haut. It is open all year like many resort hotels in the mountains.

No sooner are they down than they are thinking of going up again. The slopes are dotted with skiers at Ste. Adèle and the tow is kept busy.

A dog team is a strange sight to the eyes of a cosmopolite and perhaps induces a twinge of envy after an arduous trek across the snow.

The open sleigh drawn by a spanking team is no novelty in the Laurentians. This is a delightful manner in which to view the countryside on a fine winter's day.

With its backdrop of mountains and setting of snow and evergreens Ste. Adèle possesses the quiet charm typical of Laurentian villages in winter.

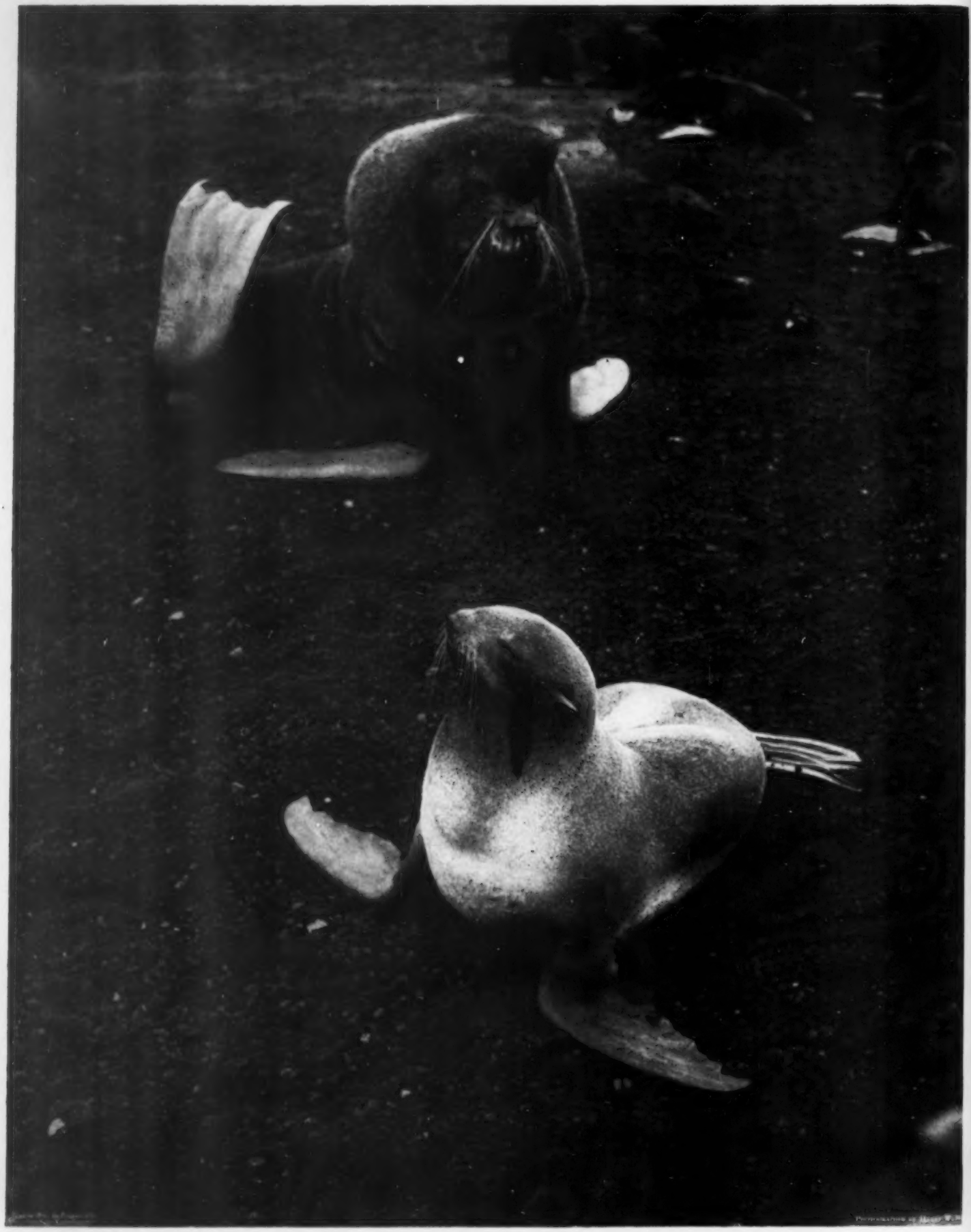
Skiers bask in the sun and take their ease in the solarium of popular Gray Rocks Inn close to St. Jovite.

A long cross-country run produces voracious appetites which make a break of this sort very welcome.

The enthusiasm of the group is obvious. They are waiting their turns on the T-bar lift at Jasper-in-Quebec, a resort hotel near St. Donat.

The pleasure of touring the Laurentian countryside on skis is enhanced by discovery of picturesque vistas such as the one above.

For those out after dark the illuminated cross blazing against the sky over Ste. Marguerite serves as a welcome beacon.



The great bull seal and the elegant little cow seal; he probably weighs six times as much as she does.

The Seals of the Pribilofs

by F. H. WOODING

Drawings by Gordon Fairbairn
Photographs by courtesy of Fouke Fur Company

IN THE FAR-OFF Bering Sea, about 300 miles west of Alaska, are two of the strangest islands in the world. They are called St. Paul and St. George and they belong to a group of five islands known as the Pribilofs.

For part of the time furious storms lash high seas against their rocky shores. At other times they are almost lost in dense fog. Some mariners call them the "Mist Islands".

The Pribilofs, formed many thousands of years ago by volcanic action, are desolate islands, treeless and almost soilless. Even so, for a brief period each year tundra grass, wild wheat and brilliantly coloured flowers manage to find root and to prosper. They are a haven for bird life. There, each season, auklets, cormorants, gulls, murres, kittiwakes, and sea parrots build their nests and rear their young. Reindeer and blue foxes also live there, although there is little to shelter them from the rain or the cold.

No treasure ever buried by Captain Kidd can equal the treasure to be found on St. Paul and St. George islands. These are not treasures like gold and diamonds and rubies supposed to have been hidden on islands in other parts of the world by pirates of old; but treasures of fur that come from curious animals known as fur seals. From these furs are made the beautiful coats and wraps that are much in demand in many parts of the world. Naturally, the animals they come from are very valuable.

Few people have seen fur seals alive, although their cousins, the sea lions, are often found in zoos and circuses. This is due to the fact that fur seals make their land home far away from civilization, and live on land only about five months out of each year. For the other seven months they live in the ocean where they are very rarely encountered. It is doubtful that fur seals could survive in captivity.

Fur seals have attracted the attention of men and nations for many years. This has given them an important place in our history, especially in the history of Alaska and the Bering Sea.

So before we journey to St. Paul and St. George Islands to watch the fur seals, perhaps we should learn something of their past, and of how it is they became important in our history.

More than 150 years ago a Russian navigator, Gerassim Pribilof, discovered the five Islands, which then became Russian property and were named Pribilof after their discoverer. Each island, however, was given its own name. Today they are known as St. Paul, St. George, Otter, Walrus, and Sea-Lion Rock. St. Paul and St. George, forty miles apart, are the largest of the group.

Gerassim Pribilof set out in search of these islands because he had heard tales of strange water animals which inhabited them. These, of course, were the fur seals. Men had known about the fur seals long before, but had not known where they made their land homes. His discovery, therefore, was an important one because it gave Russians ownership of the seals when they were not in the sea.

For many years the Russians killed the seals and used the skins to line their homes for warmth against the bitter cold of the Arctic winters. Then they learned from their neighbours, the Chinese, how to remove the coarse outer hair that guards the finer and more delicate fur underneath. Soon they began the manufacture of luxurious coats and wraps. The Empress of Russia, Catharine the Great, had many garments made of seal skins in her royal wardrobe. The seal skins quickly became popular in other parts of the world.

The Pribilofs remained Russian property until 1867. In that year the United States bought Alaska from Russia for $7,200,000. As part of the deal the United States was also given ownership of the Aleutians. At the time many people were critical of the purchase and felt that the United States had made a poor

bargain. Everybody today knows that it was a good bargain.

In those days it was believed that between three and four million seals made their summer home on the Pribilofs. But as the demand for the furs grew, so did the slaughter of the seals. This slaughter was carried out from a large fleet of ships when the seals were in the ocean. It was known as "pelagic" sealing and was both cruel and wasteful. Before long the number of seals grew very small and there was a danger that they would all be destroyed.

Because of the value of the seals and the needless waste conservation measures became necessary, and in 1911 the United States, Canada, and Japan signed a treaty which made pelagic sealing unlawful. Russia signed the treaty, too, although she was interested only in the protection of the seals on her side of the Pacific. Those seals do not migrate to the Pribilofs but to other islands near the Kamchatka Peninsula, a long neck of land jutting out from Siberia, a part of Russia.

Under the terms of the treaty the United States became responsible for the Pribilof seals. It was agreed that the animals would be killed only when they were on the Pribilofs so there would be no more cruelty and needless waste. Canada and Japan, however, for giving up pelagic sealing, were awarded a proportion of each year's catch of skins. This agreement worked well for nearly thirty years. Then, in 1941, Japan withdrew. Today scientists of all three countries are working together to find out more about the seals and to work out a new treaty.

Now, perhaps, it is time to sail to the faraway Pribilofs to learn something about the seals themselves.

* * *

The ship taking us to the Pribilofs would have a long journey. We would have to begin the journey well before the end of April. If we sailed from Seattle, Washington—or Vancouver, British Columbia—we would have to travel northward for nearly a week before we entered the Bering sea. But for most of the trip we would sail through the quiet waters of the "Inside Passage," which stretches all the way from the United States-Canadian border to the Gulf of Alaska. The "Inside Passage" is a deep sea lane which runs close to the mainland. Hundreds of large and small islands protect it from the rough waters of the open Pacific. During this part of our voyage we would see some of the most beautiful scenery to be found anywhere in North America. We would also pass many commercial fishing boats, for the "Inside Passage" is rich in stocks of salmon, herring and other fishes.

Once we reached the Gulf of Alaska our ship would change course. We would sail in a more westerly direction. In a day or so we would reach the Aleutian chain of islands. Then our course would change again toward the North Pole. Now we would be in the Bering Sea and not many miles from our goal.

As we sailed through the Bering Sea we would probably encounter heavy fog. Or perhaps we would have to ride out one or more of the fierce storms which so frequently visit this area. If we were very lucky the weather for a while might even be bright and the sea calm. But sometime during this part of our journey we would likely spot some seals; for the great migration to the Pribilofs would be on and from many parts of the Pacific millions of these animals would be swimming northward.

In our imagination let us leave our ship and join the seals in the water.

* * *

The herd we are following is a large one. It is made up of a hundred or more full-grown males, or "bulls". The bulls are always the first to reach the islands. It is not until some weeks later that the cow seals and the younger males, or "bachelors", as they are called, arrive.

The seals are moving quickly, swimming at about eight knots in a continuous rolling motion. With each swell of the sea their bodies break through the water. Swimming in this fashion makes them look like porpoises. What

The bull seals have come ashore in May or early June and each has laid claim to thirty feet or so of rock ground as his home territory. Now they wait by the shore for the arrival, two or three weeks later, of the cow seals who will be gathered into the harems.

great power and what wonderful grace these animals display as they move northward to their destination! They are huge animals, some weighing as much as eight hundred pounds. Some are as long as eight feet. All are in their prime, in superb condition, and well fed.

For hours at a time they swim. Then, feeling the need for rest, they stretch out on their backs and let the roll of the sea sooth their tired muscles. But if they sleep, they sleep with one ear alert for danger. Seals have not too much to worry about in the sea for they are more than a match for most would-be enemies. The killer-whales and sharks are mainly to be feared. The "killers" are vicious mammals which travel in packs and attack anything that crosses their path. They can swallow seals whole and they often destroy even the largest of baleen whales. When killer-whales are about, it is almost certain that some seals will be eaten.

The seals do not rest for long. Flipping over again on their bellies they resume their swimming, perhaps a little faster at the start as if to make up for lost time. Their normal cruising speed is about eight knots, but they can reach fourteen if they want to. But no matter how slow or how fast they travel, it is always with such seeming great ease. And to watch them as they break in and out of the water is to watch a motion of great beauty.

For days on end the seals keep up the same relentless pace. Then early one morning it happens. Excitement and restlessness overcome them. They stop swimming. Lifting their whiskered heads above water they sniff the air. They can see nothing through the fog, but there is a strange smell about them. It is the smell of land. They have arrived at the Pribilofs.

* * *

The Pribilofs at this season of the year are just shaking off the mantle of the Arctic winter. The ground, what little there is of it, is hard. Yet, beneath it, plants are beginning to send up the little green shoots which later will grow into rugged, but curiously beautiful flowers. Here and there burned out craters and shallow ponds are still frozen over. Along the severely precipitous shore, the sea beats against the

narrow beaches, sending its icy cold surf onto the stretches of crumbled rock and lava sand, just as it did a thousand years ago. Chunks of Arctic ice, once part of the great Floating Ice Pack which covers the North Pole, or perhaps offspring of the many glaciers of Alaska or Siberia, bob sullenly up and down in the heaving sea in the little bays and inlets. The scene, as always, is one of desolation, without warmth, and without welcome.

But to the seals it means home. It means a place where children can be born and raised and the race carried on. Because it means these things it must surely be a welcome sight to them after their long journey.

For a few days the bulls stay mostly in the water. Then one by one they go ashore to await the arrival of the cow seals.

Home to a bull seal is simply a patch of ground about twenty feet square. To get and keep that home, however, frequently means a bitter struggle. For the bulls, companions during migration, become mortal enemies of each other on land. Savage fights often occur when one bull tries to steal the home of another.

In a few weeks, or about the beginning of June, the cow seals arrive. They are much smaller creatures and at first are very timid. Finally they, too, go ashore. Once on land they join one of the "harems" set up by the bulls. The bulls are very jealous husbands despite the number of wives they have. When a cow joins a harem she cannot belong to another, even though the harem she is part of is made up of fifty or more other cows.

Within a few hours of arrival on land each cow seal gives birth to a single baby. Almost overnight the population of the Pribilofs is doubled. The babies are funny little creatures. They are jet black and their heads seem much too large for their tiny bodies. But, like their mothers, they have large, dark blue eyes and beautifully long lashes. They are very awkward at first and find it hard to move about and flap their little flippers.

Babies of any kind seem to be hungry the moment they come into the world. Baby seals are no exception. Almost immediately they cry

The picture on the following pages shows part of a seal rookery comprised of several harems. Each group of cows and pups is dominated by the large bull or 'beachmaster' who keeps a strict eye on his property.

for food, and this they get from their mothers in the same way that puppies or kittens are fed.

The baby seals grow very quickly and as they grow their bleating becomes louder and louder. Life on the Pribilofs is a noisy one, and day and night a continuous roar from young and old alike can be heard. Often, sailors on ships close to the islands can hear this roar before they see the islands themselves. The few Aleuts and government officials who live there must surely find the noise a bothersome one.

In a few weeks the mother seals are able to leave their young who by now have less need for attention. When that time comes the mothers make excursions to sea, either to swim and enjoy the relaxation of the salt water, or to find food. Frequently they swim as far as 150 miles away from the islands. During that time they gorge themselves on cuttlefish, squid and other delicacies.

Although there may be hundreds of thousands of baby seals on the islands, a mother seal is always able to find her own. This is very remarkable, for to a human eye, at least, the babies all seem to look alike. The mother, with the mysterious instinct given to her by Nature, somehow is always able to pick out her own, even though the youngster may have wandered far from its home. But sad is the baby seal whose mother fails to return. For no mother seal will nurse the offspring of another. Every year many baby seals, whose mothers have been destroyed by killer-whales or who have met death in some other way, are left to starve and die.

It is not until September that the baby seals stop feeding on their mothers' milk. By then they are strong, husky youngsters. Having learned how to swim and how to defend themselves in battle against others their size, they, too, go out to sea for their food. Like their parents, they eat great quantities of fish.

Life on the islands, meanwhile, goes on. It is riotous, playful and quarrelsome. Many of the quarrels are caused by the "idle bulls" who live on the fringe of the rookeries. This is because they arrived too late to get wives or because a harem they did have was taken from them by other and more powerful bulls.

The "idle bulls" become wilder and more savage as the weeks go by. Often they invade a harem and try to steal a wife. Sometimes they are successful and in this way are able to set up harems of their own. More frequently, however, they get into fights with the owner. These fights are very fierce and often one or the other is killed.

Early in August new herds of seals arrive. They are beautiful, two-year old females. They arrive in great numbers. Most of them join the established harems, some become the wives of the idle bulls, and others simply stay near the water. It is not until the following year that these seals give birth to their young.

About the time the two-year-olds appear on the scene, a change comes over the big bulls. During the months gone by, they never left their harems, not even to take a quick dip in the sea. If they had left their homes for a single second trouble would have started. For other bulls would promptly have invaded the harems and shuffled off with as many wives as they could steal. So the big bulls stayed in their rookeries all this time and watched carefully over their families. At first they did not mind their vigil, for their family ties were very strong. Gradually, however, lack of food and drink made them thin and restless. One by one, satisfied that they had fulfilled their tasks well, they cross over the boundaries of their harems and slip quietly off to sea.

In a herd that may comprise as many as fifty or more seals—bulls like themselves and cows who for a while have left their children—they swim toward the fishing grounds perhaps hundreds of miles away. There, for days, they feed and enjoy the freedom they have so long denied themselves. In a couple of weeks or so they return to their islands, their excursion having given them back much of the strength they had lost. No longer, however, are they masters of their harems, for during their absence their homes have become broken up and their families scattered. From then on they live their own lives, completely free of any care for their children or for their former wives.

* * *

There is another group of seals which so far we have only briefly mentioned. These seals are the young males, from two to five years old.

A small family group; some bulls acquire up to 100 cows. While guarding their territory, for about two months, the bulls never leave and do not eat or drink.

They are the "bachelors" and they have been on the Pribilofs since about the middle of June. It is from these animals that come the wonderful furs you learned about earlier in this story.

The bachelors are much smaller than the breeding bulls, and, of course, are a good deal younger. They are, in fact, too young to establish harems of their own. Having no family responsibilities, they spend most of their time at play. They are a happy, carefree lot, with all the mischief of small boys. The bachelors are forbidden to live in the harems and so they make their home on the nearby meadows and beaches. These areas are also known as "hauling grounds".

These youngsters are perhaps the most interesting and most amusing of all the seals on the islands. They frolic like puppies and are always in good humour. They are splendid swimmers, too, and can go through the water at amazing speeds.

On the rocky shores they enjoy themselves by shoving each other into the sea. This they do over and over again. When they tire of this sport, or of swimming, they waddle back to the meadows to stretch out on their backs, or lie flat on their stomachs, to sleep. But not for long. In a little while they begin chasing each other again or engage in playful wrestling matches.

It is a good thing that the bachelors live pretty much by themselves. Because they do, selecting those with the best skins is made much easier. It is also possible to get the skins without disturbing the other seals.

Early every morning, between June 15 and July 31, a group of these seals is driven to the edge of the meadows. There great care is taken to choose the best animals. They are almost always the three-year olds. Those selected are quickly and painlessly killed and their skins removed. No female or breeding bull is ever killed, except for scientific research. Once the skins are taken, they are washed, the fat is removed and they are cured in salt.

Once a year, in the late fall, a ship calls at St. Paul and St. George islands to collect the skins. There they are apportioned between Canada and the United States. The skins, which are packed in barrels, are then taken to Seattle, Washington. You will remember that Canada was awarded some of each year's skins for giving up pelagic sealing. Canada also helps to protect the seals during their annual migrations.

Some days after their arrival at Seattle the

skins are shipped to factories in both countries. At the factories skilled workers use special tools and machinery to make them into luxurious furs. This process takes about 90 days and each skin is put through more than 125 separate treatments before it is ready for market.

When the skins are finally processed, they are sold at public auction to furriers from all over the continent who then make them into coats and wraps. No furs are more beautiful than those made from the Pribilof seals. They are soft, sleek and luxurious beyond all description.

* * *

Late in October a new restlessness comes over the seals. By now the babies have grown into youth. They are very strong and have become capable swimmers. There are now no more harems on the islands and there is much less fighting among the bulls. The seals, young and old alike, mill about on land in their thousands, or loaf in the sea or on the beaches.

As each day passes the weather becomes colder, and low, black clouds cover the sky. The reindeer and the blue foxes seek out the valleys to avoid the icy winds. The birds, except those few which stay all year, have long since departed. The Aleuts and the white men are now garbed in heavier, warmer clothes. Snow or rain comes in gusts, driven by the piercing gales, and crusts of ice cover the surfaces of the little freshwater lakes and ponds. Tremendous waves lash against the beaches. Winter, the dreadful lonesome Arctic winter, is on its way.

Then one day, as if in answer to some mysterious signal, thousands of cows and young seals take to the water. For a while, they swim about near the shores. Finally they strike out to sea. Their annual migration to the southward, to the warmer waters thousands of miles away, has begun.

Day after day, for nearly two months, this great exodus continues until not a seal is left. A great, awesome silence comes over the Pribilofs—a silence that is broken only by the sound of the winds and the crashing of the surf on the shores.

Just as mysteriously as they arrived, the seals have left. Once again the Pribilofs are alone in their desolation. Gradually winter takes over completely.

But as assuredly as summer follows spring the seals, by the thousands, will be back. Where they go during their long months at sea is still a mystery unsolved. Somewhere, however, in the vastness of the Pacific Ocean, they remain for the next seven months. As far as is known they do not again touch land. The sea is their only home, and from it they get their food, their strength and their great wisdom. One day, when the islands have been released from the grip of winter, they will turn their whiskered heads northward again. The call of the Pribilofs will be upon them.

Old Morley Church, which was opened in 1875, is believed to be the first Protestant church in southern Alberta. The wood was hewn in the foothills nearby and sawn in the little mill brought from Ontario.

Old Morley Church

by JOHN LAURIE

Photographs by the author and Norman J. Pickard

SINCE 1926, motorists in Alberta on their way to Banff have noticed a cairn some forty miles west of Calgary and many have driven off the highway to look at it. It is an interesting cairn. Into three of its sides are inserted bronze plaques, one of which reads; "To the Stoney Indians. They rendered unto Caesar the things that are Caesar's and to God the things that are God's". Two others commemorate the work of the late Rev. George McDougall and that of his son, the late Rev. John Millward McDougall, D.D. These three plaques are a condensation of the history of the Bow River Valley. In the neighbouring hills, the McDougalls, pioneer Methodist missionaries, settled among their friends the Stoney Indians, long separated branch of the Assiniboine tribe, who had maintained an uneasy and isolated existence between powerful Cree and Blackfoot enemies.

South of the cairn has stood a battered, ageing, frame church, believed to be the first Protestant church in southern Alberta. Some have walked across the field to prowl about the weather-beaten old structure and have left on its walls their names to commemorate their visit. Others, more serious-minded, have no doubt wondered why Albertans have been so neglectful of such a memorial.

In the autumn of 1875 the Rev. John McDougall opened the church on the flat between the

Bow River and what is now the highway. Of all Dr. McDougall's little settlement on the banks of Jacob's Creek, only this building still stands. Eastwards the Bow Valley stretches towards Calgary; westwards the Rockies form a magnificent background, while the foothills almost encircle the little church in their protecting arms. In those days there was no Calgary and no busy highway when the Stonies gathered here to hear their friend and counsellor preach; only recently had the North West Mounted Police reached Fort Macleod. Warring tribes fought or chased the buffalo. Fort Garry, two thousand miles away, was still the metropolis of the West. A great quiet flowed over the place, a quiet that even today is broken only by the winds as they funnel down the Bow Valley. It is the quiet of the everlasting hills, the peace of God. Among the hills are the little homes of the Stoney people who still revere the name of John McDougall.

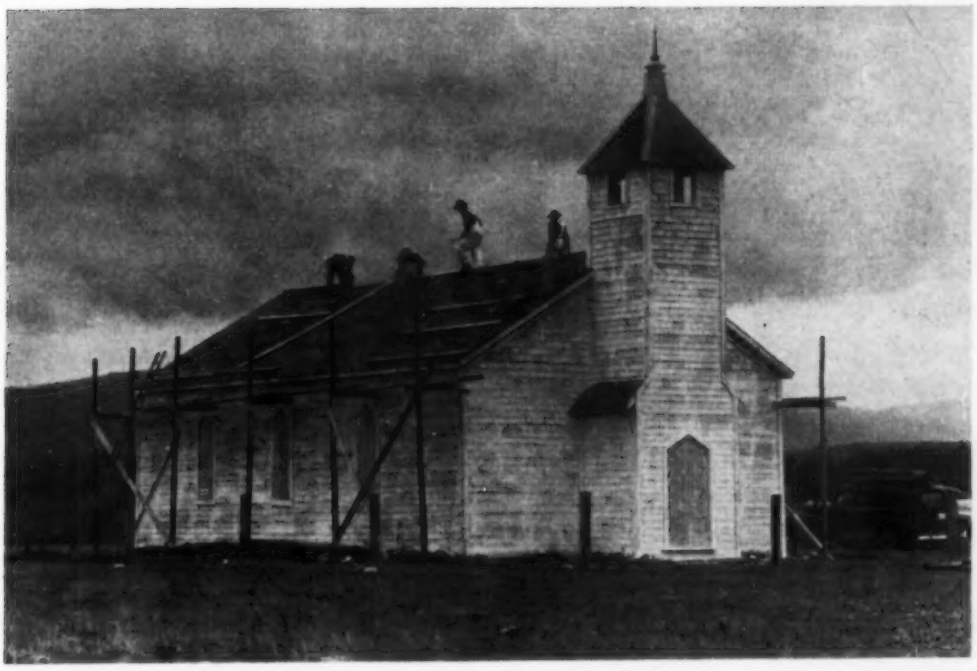
Built of logs, hand-hewn timbers, and lumber from the little mill John McDougall and Andrew Sibbald had brought out from the Ontario so far away that it seemed only a dream, the building has withstood, remarkably well, time, weather, and passing vandals. Years have gone by quietly since the church was in regular use. A newer church has followed the Indian Agency westwards and across the Bow. At this newer site one hears the Stoney children at play around their schools, the rumble of passing trains, and all the sounds of modern life.

Skilled volunteers are mending the roof of the little church which had fallen into sad disrepair since the building of a new church near the Indian Agency.

The old church seems to ponder the changes of the years and to grow old with increasing charm, but it has seen stirring times. In the troubled days of Riel, Stoney chiefs and leaders must have talked here with Dr. McDougall and meditated the pros and cons of active participation on either side. The glorious days of freedom, of successful raids upon their enemies on the open plains were still fresh then; the buffalo were gone and efforts to confine a freedom-loving people to a reserve were galling to their spirits. On the other hand, the Rev. John McDougall's doctrine of peace among the tribes had settled deep into their minds. Perhaps the momentous decision was made here to send four leaders out as scouts when Dr. McDougall left as chaplain to serve with Her Majesty's Armed Forces. Like all Dr. McDougall's Indians, like all the Indians of southern Alberta, the Stonies kept the peace made at Blackfoot Crossing in 1877, a pledge of peace and loyalty renewed by a descendant of Chief Bearspaw when Queen Elizabeth II visited Calgary about two years ago. Truly, this little church is a monument to the brotherhood of man and the fatherhood of God. Through its door have passed men of many faiths, of many tongues and of many races to whom the Rev. John McDougall gave comfort.

Peacemaker would be a fitting title for this man. He it was who journeyed to many tribes to speak of the Treaties which Her Majesty, Queen Victoria, would make with the Indians when her government replaced the shadowy sovereignty of the Hudson's Bay Company. This man had advocated the formation of a body of police to drive out the whisky-trader and to ensure impartial justice for all upon the plains of Alberta. None more than he made possible the building of the Canadian Pacific Railway across the foothills and the peaceful settlement of southern Alberta.

Many attempts have been made to restore Morley church but until now without success.



As public funds are not available for denominational buildings, volunteer workers do their best to restore their church in obedience to the title of their voluntary organization, (A.O.T.S.) "As One That Serves".

Aid from historical societies and from public funds is not available for denominational sites, and learned societies rarely have sufficient funds; other groups are busy with community causes of immediate importance. Indeed, Alberta, as a whole, is yet too close to her past to feel the necessity of preserving it.

Now, however, a movement is achieving something. Initiated by the "As One That Serves" group of Central United Church in Calgary (also a John McDougall church) and some citizens of the district, without much cash but with skilled voluntary labour under professional supervision, the work proceeds. A new roof is on the building, shutters protect the newly-installed windows, white paint covers the outside and green the new shingles. A skilled craftsman has volunteered to restore the interior. Eventually, the committee hopes to build a curator's cabin near by for the protection of the restored building; George McLean, widely known as Walking Buffalo, a former chief of the Bearspaw band, and a pupil of the late Rev. John McDougall has volunteered to serve as custodian. No better choice could be made.

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TEXTBOOKS ON THE GEOGRAPHY OF CANADA

by J. Lewis Robinson

A Review Article

Although geography is a newcomer to the curriculum in Canadian universities, there are already a number of useful textbooks published on Canadian geography. These texts may be considered a sign of the vigour and enthusiasm of a growing group of young Canadian geographers. For readers who may not be familiar with some of these books the following comments are made. Some of the comments are critical, but this does not mean that the books are poor. On the contrary, this article is a compliment to the good work done by Canadian and American geographers, but it is also a reminder that we have made errors, and therefore we should be aiming to do still better work in the future.

Although there were texts written about Canada for school use prior to World War II, this discussion will be confined to texts which were published after the war. The first modern college text on Canada, *An Economic Geography of Canada* (Macmillan, 1945) was written by Prof. A. W. Currie. The text was planned at the University of British Columbia during the early war years to be the combined efforts of Dr. Gordon Davis, geographer and Dr. Currie, economist. The union of these two brains resulted in the first "economic geography" of Canada. Unfortunately Dr. Davis died in the field in 1943 while still a young man, and Canada lost an excellent teacher. Dr. Currie continued the book project alone, doing a prodigious amount of reading about the resource development of Canada, and compiling an excellent bibliography.

Like many first books, it had its faults; but it was a good and sound step forward for Canadian geography. Currie used a regional approach that crossed political boundary lines and dealt with Canada by physiographic regions such as the St. Lawrence Lowlands, Canadian Shield, Cordillera, etc. Since these regions differ greatly in their physical geography and economy, they seem to form a sound approach to the study of Canadian regionalism. However, to a geographer, the resource information tended to be more economic than geographic. There were few examples of significance of position, area, or distance; relationships with natural environment were lacking; and there were errors in the description and interpretation of physical geography. Students complained that the text was heavy reading, but the book sold well and a second edition was published in 1947. As a beginning, *An Economic Geography of Canada* served a useful purpose as a reference book, and contained a great deal of excellent and well-organized information.

The second text, *Canada—A Study in Cool Continental Environments*, (Methuen, 1947) was written by Dr. Griffith Taylor, then Head of the Department of Geography, University of Toronto. Griffith Taylor was one of geography's most prolific writers who was able to turn out a text nearly every year. His Canada text, however, showed the result of such speed. Sections of his field notes of travels were included with little editing, and numerous out-of-date sources of information were used. The book was criticized in many reviews, the most devastating being that of George Kimble in the Geographical Journal. In spite of the ten pages of "correction notes" which I had my students use, the text, like its author, was stimulating and interesting, and taught many valuable geographical concepts and ideas. Taylor divided Canada into more than twenty regions and the reader was able to see and understand the essential differences from place to place. Who knows but that one or two good ideas or concepts are more valuable to students than many pages of accurate statements and statistical interpretations! However, it *was* disconcerting for Canadian geographers who wanted information about Canada to be accurate in foreign texts, to have an example of inaccurate writing prepared by the then senior Canadian geographer!

The third text is included here at the editor's request and is my own, *The Geography of Canada**(Longmans, Green, 1950). Obviously any statements about it are prejudiced and biased! Although meant to be a text for Junior High School, the book has been used from Grade 7 to First Year University in various provinces, depending upon the geography background of the students. The book differs from the others in that about half of the text deals with Canada as a whole (i.e. systematically—landforms, climate, agriculture, mining, etc.). The last part describes Canada by physiographic regions (as Currie did) and reviews the resources and

* Reviewed in Canadian Geographical Journal, May 1951.

economy of each region, to enable the student to see the relation of the region to the total economy of Canada.

The final and most recent text, *Canadian Regions* (Dent, 1952) is the largest volume and gives the most complete coverage of the geography of Canada. The book was the idea and work of Dr. Donald Putnam, present Head of the Department of Geography at the University of Toronto, with minor assistance from B. Brouillette (Quebec chapters). D. Kerr (B.C. chapters) and L. Robinson (Northland chapter). The book has received a mixed reaction in reviews by our professional colleagues. (See N. Nicholson in Aug. 1954 issue of Can. Geog. Jour.). There is no doubt that the book is thorough; in fact some reviewers state that it goes too far in that direction and is encyclopedic. Many sections are a return to the dull, old-style statistical accounts. The text is also criticized because its "regions" are mainly provincial areas and not "geographic" regions. This regionalism was chiefly for the convenience of the authors, and did not overlook the fact that geography as taught in the schools is a *provincial* matter. Critics of these regions have not cited, however, that the real "regions" of Canada are then discussed in each of the chapters, and that the reader *does* actually receive a good word picture of the regional differences in Canada, and also sees the importance of the regional centres.

As the latest book on Canadian geography the Putnam text is the best source of information on Canada. Its organization is excellent and readers can find easily the data for which they may be searching. Although the maps have been criticized for their uneven workmanship (the result of more than one draughtsman), reviewers have generally failed to note that this is one of the best "mapped" regional texts. There are a great many maps, nearly all of which show significant distributions or regional relationships, and which have never before been put together between two covers.

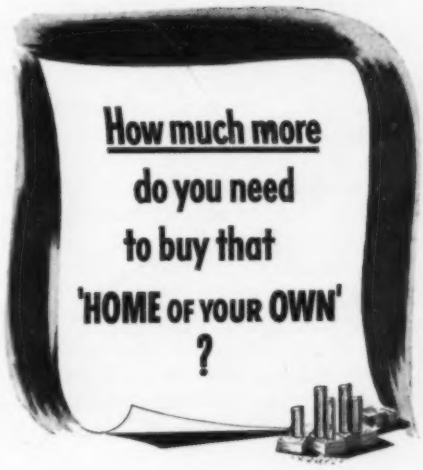
As stated in the introduction, Canadian geographers have a right to be proud that there are at least four geographies of Canada currently available—not only for our Canadian students, but for our foreign colleagues who wish to know something about the geography of Canada. The geography of Canada is continually being written, in condensed form, by geographers and other writers in foreign lands, as part of world or continental geographies. If we want that information to be accurate, Canadian geographers have a two-fold responsibility—that of writing accurate geography that our colleagues can, and will, read; and that of reading critically and correcting the geography of Canada as described in other texts. It is in this latter connection that I have been asked to comment on three modern geography texts on North, or "Anglo", America, written by American geographers and including sections on Canada.

Canada's text situation is in contrast to the United States where, despite the much greater number of geographers, there is not a single college textbook entitled "The Geography of the United States". American geographers have written texts on other parts of the world such as Latin America, Asia, China, Japan, Europe, Germany, Soviet Union, etc., but very few have attempted to write about their own country or even about North America. Since many articles have been published in the professional journals about most phases of the geography of the United States, it cannot be because of a lack of information. A partial explanation is that the geography of the United States is well taught at elementary and high school levels.

One wonders whether this shyness about publishing texts on the United States is due to worry of being found to be wrong or inaccurate by fellow geographers. Every geographer knows his own local region best, and anyone who attempts to generalize, as is necessary for a text on a large region, is in danger of making mistakes or incorrect interpretations. Since modern geography *does* deal with interpretation and relationships, and is no longer the collection of dull and statistical facts, there *are* opportunities for misinterpretation. This reviewer read critically two of the recent revisions of geographies of North America, looking at them solely from a narrow Canadian viewpoint as to their accuracy on Canadian geography. When one realizes how many errors in fact, interpretation and understanding have been published in American texts about a country as close to home as Canada, geographers should hesitate to accept unquestioningly the accuracy of books on far away places in other continents!

The first edition of L. White and E. Foscue *Regional Geography of Anglo-America* (Prentice-Hall) came out in 1943. This text divided North America north of Mexico into regions that are primarily physiographic, or landform, regions. Since

(*Continued on page VII*)



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(*Continued from page VI*)

many of these regions extend north-south, across the international boundary, the authors, as good geographers, dealt with Canada and the United States together in each of these "geographic" regions. In theory this was an ideal way to treat the geography of two or more political entities that are located in one region, but in practice Canada was almost neglected in each of the regions. On the basis of people and industries we, of course, play a minor part compared to the areas to the southward, but on the basis of "geography" and resources, Canada deserved better coverage. In addition, several of the Canadian descriptions were based on old information which did not give an accurate picture of modern Canada. It was small wonder that some students called the text the "Geography of the United States—P.S. Canada"!

The new edition (1954) of *Regional Geography of Anglo-America* is now published and many of these early criticisms have been rectified. The authors, realizing the impossibility of knowing *all* of Canada well, called on five Canadian geographers to read over sections of the old text and contribute corrections and comments. Canada still receives rather brief treatment, however, having but 60 pages out of the total of 440 regional pages. In the regional chapters that deal with north-south areas such as the Appalachians, Interior Plains or Pacific Coast, Canada has about one-fifth the number of pages of the adjoining American section.

Despite the attempt of White and Foscue to have their chapters checked there are still a few minor factual errors. In the Appalachian region, for example, we read that Prince Edward Island is a "world leader in fur-farming", although Canadian statistics show the steady decline of fur-farming there. On the map of the Northern Continental Forest (p. 242) the Steep Rock iron ore area is incorrectly placed in south-central Manitoba, where there is another little village called Steep Rock. On the map of the Rocky Mountain region, the authors chose to include all of the Interior Plateau of B.C. with the mountain region rather than in the following chapter on the Intermontane Plateaus, and then placed the name "Rocky Mountains" too far west and in the Plateau. The inclusion of the Plateau in this region seemed to have meant little to the text, however, since it is not mentioned again in the chapter. In fact almost the only mention of Canada in the whole Rocky Mountain chapter is a reference to our famous National Parks of Banff and Jasper. So much for most of British Columbia!

Another geography text which deals with Canada is that of A. J. Wright, *United States and Canada—An Economic Geography* (Appleton-Century, 1948). Despite its title which gives equivalent standing to Canada, the text is essentially an economic geography of the United States. The first 394 pages deal entirely with regions in the United States, and the following 46 pages describe some of the regional resources of Canada. There are also 6 pages on Newfoundland, along with chapters on Alaska and Hawaii. While reading it a few years ago I noted no less than 30 errors or misconceptions in the 46 pages! Although this is a condemnation of the author's knowledge of Canada, it must also be noted that some of the errors were repeated from official government sources in Canada. We should therefore be careful of our own glass houses if we start to throw stones!

Samples of some of the factual errors being told American geography students by Wright are as follows: (1) Canada exports most of her tobacco for processing abroad. (2) The St. Lawrence River is frozen for 6 months of the year. (3) St. John's is in New Brunswick. (4) Growing seasons (sometimes confused also with frost-free seasons) are defined by the *British* Meteorological Service. (5) A picture of reindeer grazing in the *Yukon*, where there are no reindeer. (6) The reindeer herds of Mackenzie delta were established "just after World War I"—(17 years after). (7) The Fraser River delta produces chiefly peaches and apples (he probably meant the Okanagan Valley 200 miles away). (8) British Columbia's recreation industry is "an absentee-owned and operated industry".

The latest revision of a North American text is that of Miller and Parkins, *Geography of North America* (Wiley, 1954). The late A. E. Parkins has been replaced by Bert Hudgins in the new edition, but the Canadian section was written by George Miller. This book was considered to be one of the pre-war standard reference texts on North America, and the revision maintains that high standard for the United States. In the present edition the regions of the United States receive 480 pages, Canada has 110 pages, and Mexico and Central America have 64 pages. Thus in terms of volume there is more on Canada in this text than in the

(*Continued on next page*)

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EDITOR'S NOTE-BOOK

Robert Charles Wallace, C.M.G., F.R.S.C.

The Society, as well as his many friends, suffered a loss in the death on 29th January of Dr. R. C. Wallace of Kingston, Ontario. When this Society was formed, in 1929, Dr. Wallace was invited to become one of the first Board of Directors. He did so and helped to launch the organization on its career. At that time he was President of the University of Alberta, which province he represented among the officers of the Society. His interest in the work of the C.G.S. and its Journal never flagged and in 1938 he was elected Vice-President, which office he filled until his death. Members who were able to attend the Annual General Meeting last year will recall the delightful reminiscences "geographical and otherwise" that Dr. Wallace gave in his address.

Born in Orkney, Dr. Wallace was a graduate of Edinburgh and Göttingen Universities. His renown as an educationist was such that he received honorary degrees from not less than seventeen universities, in several countries. From 1936 to 1951 he was Principal and Vice-Chancellor of Queen's University. After his retirement he became Executive Director of the Arctic Institute of North America, and made many trips to Ottawa where his talks pleased numerous audiences. News of his death has saddened his friends in all parts of Canada.

Contributors

G. H. Bayly (*Reforestation in Ontario—1955*) graduated in the science of forestry from the University of Toronto. After a short spell of forestry work he joined the R.C.A.F. for war service. He entered the Ontario Department of Lands and Forests after the war and in 1953 was appointed chief of the division of reforestation. — F. H. Wooding (*The Seals of the Pribilofs*) is director of information and educational service in the Department of Fisheries of Canada.—John Laurie (*Old Morley Church*) is a teacher of English in Calgary. He is keenly interested in the Indians of Alberta, about whom he has written many articles.—Dr. J. Lewis Robinson (*Textbooks on the Geography of Canada*), teacher, author, and specialist in the study of geography, is chairman of the geography division at the University of British Columbia.

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(Continued from previous page)

other two books and, on the whole, treatment of Canada is good. American students will know a great deal about Canada when they finish reading the chapters. However, in reading the Canadian section I noted six single-space typewritten pages of errors, misconceptions and questionable statements which were sent to the author for comment.

One immediately begins to wonder about the accuracy of the book when the bibliography in the introduction has errors such as "Geological" Review for The Geographical Review, and Canadian Geographical "Magazine" instead of Journal, and an incorrect title of Currie's text on Canada.

Although the author has travelled widely across Canada, we wonder at the impression our country gave when we read:

(1) "Much of Canada has not been explored".
(2) The Canadian Shield is "only partially known along its southern edges".
(3) Our "vast forest resources have scarcely been touched".
(4) Agriculture in southern Quebec is still "primitive".
(5) The Prairie Provinces need a branch network of railways to

(Continued on page XI)

THE TRAVEL CORNER

A corner of Paris at night. In the background is the spire of Notre Dame Cathedral.
French Information Service photo

On a Shoestring in Europe

Travel in foreign countries is fraught with strange terrors for the average uninitiated person. He loses confidence in himself at thought of all the foreignness that lies before him. He becomes a little like somebody's maiden aunt who listens with tremors of apprehension to the tales of people who have "been there". Very likely he will attempt to bolster his morale by taking along a substantial travelling allowance and by being far fussier about accommodation and transportation than he would have been at home.

This, to our way of thinking, is an insulated traveller, one wrapped in the cotton wool of security. We are not going to suggest that he will not enjoy himself. In his own way he will do so. But we would like to say that, if he had a little more initiative he might manage at far less expense and also bring back much livelier memories of his travels.

Recently we had a conversation with Miss Gladys Arnold who is on the staff of the French Embassy in Ottawa and who had just returned from another sojourn in Europe. As she knows the Continent well, having been there numerous times, she was able to supply us with all kinds of information about how to travel on a limited budget and enjoy yourself at the same time.

She commenced by assuring us that transportation facilities had improved a great deal since 1945. In Western Europe, particularly in France and Italy, much new rolling stock has been purchased and put into operation. In France, Italy and Switzerland many of the trains are run by electricity; consequently, passengers may travel with the windows open and arrive at their destination feeling almost as comfortable and clean as when they set out, for of course there is no smoke or soot.

On most of the main railway lines in France, Italy and Switzerland one has a choice of three types of trains—express, rapid and local. The express is fastest, the rapid next, the local slowest. Usually the express trains have only first and second class accommodation, but most of the others have third class carriages which are less expensive. Miss Arnold stoutly defended third class travel on European trains. She found it both comfortable and interesting. In Italy especially, she pointed out, third class coaches contained a fair cross-section of the population. There seemed to be no feeling that such accommodation was in any way *infra dig.* However, she preferred third class on the faster trains rather than the local ones because newer coaches were used on them, stops were fewer and they were less crowded. On long trips the saving between second and third class tickets is considerable, while on short runs it amounts only to a few cents. A round trip, third class, from Lugano on the Swiss border to Naples, lasting two and one-half days, cost her $20.50. Return fare, third class, from Geneva by way of Fribourg and Lucerne to Lugano was $15.00.

What is the third class railway carriage like then? It differs from the Canadian day coach mainly in that it is divided into compartments to which access is gained either from a corridor or directly from the station platform. There are windows on both sides. The compartment seats eight persons and they sit facing each other. Usually the seats are upholstered in dark leather but they may be of wood. Miss Arnold assured us that even the wooden ones were comfortable since they curved to accommodate human anatomy. (The main difference between second and third class is that seats in the former are upholstered in plush and may be reserved ahead of time, while those in third class may not be reserved.) Passengers frequently bring along food and consume it in the compartment. Box lunches, in fact, are sold now in most of the Italian stations. It is just as well to examine them before making a purchase, though, for sometimes the contents are heavier

and oilier than one may like. A journey in one of these compartments almost invariably turns into a social occasion, for strangers confronting one another for a length of time become engaged in conversation and establish tentative acquaintances that enliven and shorten the miles.

It is advisable to travel lightly when going third class and to take only luggage that can be handled easily by oneself. Nothing can spoil a journey so quickly as an assortment of cumbersome bags that must be dragged about (sometimes at a gallop when a connecting train is waiting on another track) or that occupies more than the allotted space in the luggage racks of the compartments. Heavy baggage should be checked in some large city through which you will be passing later on the way to some more or less permanent address.

Miss Arnold recommended that whenever possible train tickets be purchased before entering a country and they be purchased through its national agency. As there is a small reduction on fares bought in this manner, it is less expensive. In general, she found that the most reliable and impartial information about modes of travel and their costs were obtained from the government agencies of the countries through which she passed.

In Italy *pensions* and small hotels are comparatively inexpensive. CIT, the agency of the government, will provide visitors with a list of recommended places in various Italian cities and towns. These are graded and must be up to a certain standard before receiving official approval. Once London or Paris has been reached, arrangements may be made through the local CIT office. (Unfortunately this particular service is not offered by the North American tourist offices of the Italian government.) Although Miss Arnold made no reservations prior to setting out for Europe, she said that during the busy summer season it would be wise to arrange ahead of time for accommodation in large cities like Paris and Rome.

In France, too, hotels are graded. A star system, similar to that for rating movies is used, indicating the extent of amenities and luxuries. Those approved by the government's Direction Générale du Tourisme are most reliable. In Paris, according to Miss Arnold, the rooms offering most comfort at least expense are in the sixth and seventh *arrondissements* (districts) on the Left Bank in the famous intellectual quarter of the city. If a foreigner resides here, it is generally assumed that he wishes to economize. He is less likely to be mistaken for a visiting millionaire and more than likely to receive various helpful suggestions on how to get along without spending too many francs.

View of Paris and the River Seine from the Eiffel Tower.
French Information Service photo

Food costs more in Paris than in the majority of European cities, but again, if one knows how, one may eat out at no great expense. There are many small restaurants where a meal complete with a small glass of *vin ordinaire* may be had for between 450 and 600 francs (about $1.35 to $1.60). If you want to do things in the French way, you will take your coffee later, not in the same restaurant but in a café. Many foreigners are convinced that good food may be obtained only in fancy restaurants. The truth is that the average $1.50 meal in a perfectly plain restaurant surpasses most which one can buy for the same price at home. The proprietor of the small restaurant is just as fastidious about the preparation of food as the owner of the large one, and he, too, shops every morning at the local market for fresh fruit and vegetables. After all, he must feed far more of his own countrymen than foreigners and his countrymen have cultivated their palates. For 1,500 francs (about $4.20) one may indulge in a more elaborate meal amid more sybaritic surroundings. The only notable differences between the food in this kind of place and in its humbler neighbour are that more expensive cuts of meat are served and perhaps more sauces. And, of course, you may be served by several waiters in white jackets instead of by a solitary one wearing black. In any case, there need never be any embarrassment over what a meal is going to cost, for menus with prices beside each item are posted outside almost all of the French restaurants.

At first it may seem extremely difficult to find a light meal in France. But again, you may take a lesson from the natives. When they want to eat less, the French order a dish between them and divide it. In the larger cities *expressos* (snack bars) gradually are becoming more popular. But as you cannot count upon being in the vicinity of one when hungry, it is well to remember the divided order.

Listening to travellers is no cure for wanderlust, however it can be reassuring to those who have qualms about travel. We hope that with Miss Arnold's aid we have dispelled some qualms and encouraged a few people to explore Europe the inexpensive way. It will be an enriching experience full of interest and human contacts which would never be achieved on anyone's conducted tour in first class accommodation.

* * *

If you are going to Italy this year and have been considering an excursion from there to the Middle East, you might investigate the tours offered by Adriatica Line. (Its Canadian representative is the Italian Line, 1410 Stanley Street, Montreal.) The Adriatica Line operates a variety of tours (all expenses included) from Italian ports to ports in the Eastern Mediterranean. An 11-day tour from Genoa or Venice with four days in Egypt costs $195 and up. Rates for an 18-day tour to Egypt, the Holy Land and Lebanon start at $370. Included in the price are sea and land transportation, port taxes, full board at hotels, and entrance and guides' fees on scheduled sightseeing expeditions.

(*Continued on page XI*)

(*Continued from page X*)

We have been informed by the Canadian Kodak Company that although travellers ordinarily encounter no difficulty in mailing back rolls of exposed film to Canada for processing, they will run into trouble if they attempt it from Italy or Turkey. Italian postal regulations prohibit mailing undeveloped film out of the country. Any found in the mails is impounded. However, it may be taken out of Italy in personal baggage. Turkish security regulations prohibit sending or taking film exposed but undeveloped out of the country.

* * *

A useful booklet to tuck into the glove compartment of your car when driving to Florida is the Florida Motel Directory, published by the Florida Motel Association. Almost 1,000 motels are listed in it. They range widely in type and location. There are highway and city motels, beach, resort and fishing camp motels, apartment motels and kitchenettes or "efficiencies". Rates are shown for occupancy by one or more persons and for the different seasons. The places are listed alphabetically according to location with brief notes indicating things of interest to the tourist in each area. A free copy of this booklet may be obtained by writing to the Florida Motel Association, Box 705, Orlando, Florida

* * *

There is a refreshing variety in the ports chosen for the itinerary of Cunard's "Caronia" on her spring cruise to the Mediterranean. On May 11, 1955, the ship sails from New York. Six days later she arrives at the Portuguese island of Madeira. From there she goes on to thirteen other ports: Tangier; Palma, Mallorca; Villefranche on the French Riviera; Naples; Messina, Sicily; Venice; Dubrovnik, Yugoslavia; Athens; Malta; Málaga, Spain; Lisbon, Portugal; Cherbourg, France; and Southampton, England. Passengers may return from Southampton aboard the "Caronia" or any of Cunard's other ships: unlimited stopovers are permitted. For those who desire them, shore excursions have been arranged with Thomas Cook and Sons at the various ports. Minimum charge for return passage with stopover privileges in England or France has been set at $975. The cruise lasts 37 days.

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TEXTBOOKS...(*Continued from page VIII*)

connect the main lines and "better develop the country".

(6) "No attempt has been made to estimate the iron ore reserves of Labrador".

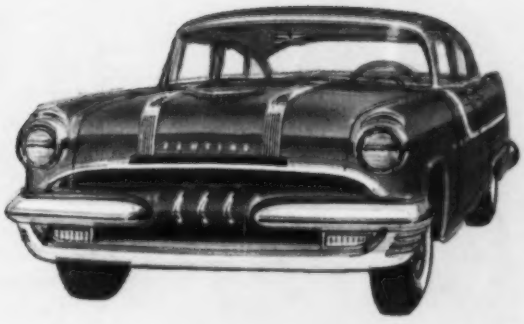
Some readers may question Miller's frequent use of statistics for much of the interpretation of economic geography principles, when the years of these statistics are not given. The author decided, as a teaching policy, not to give any year for statistical data, since some students try to remember the data rather than the principle they illustrate. Although the reasoning is sound in principle, it does mean that statements are sometimes inaccurate or misleading since nearly all statistics are pre-1950, and a few are even pre-war.

Among the factual errors noted are: (1) Montreal is warmer in winter than Toronto. (2) Canada has a great deal of anthracite coal. (3) Use of Empire rather than Commonwealth. (4) Use of the term (in the present tense) of the Inter-Colonial railway for the C.N.R. to the Maritimes. (5) Showing the projected gas pipeline to B.C. from Edmonton rather than the Peace River. (6) A statement that latitude 60 degrees has 18½ hours of daylight, without stating the month when this occurs (the suggestion being that this condition is continuous in summer). (7) A complete misconception of the cycles of abundance of Pacific salmon. (8) The statement that farming in B.C. began around Fort Vancouver, which indicates that the author has confused the old Hudson's Bay Company fort at Vancouver (in Washington State on the Columbia River!) with modern Vancouver which did not exist at the time.

Such are the disconcerting statements that Canadian geographers read in American texts. Similar errors are also found in British books, but this is not the place to discuss them. Even our own Canadian texts are not free of faults. There is therefore little doubt but that there is still much work to be done by Canadian geographers in the field of geography writing. We cannot expect our school children to know Canada well unless we supply them with accurate and readable texts at all academic levels. We should also see that our geography colleagues in other countries have access to, *and use*, recent and accurate information about our country and its resources.

Although Canadian geographers are still relatively few in number, their contribution of four Canada

(*Continued on page XIII*)



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TEXTBOOKS . . . (*Continued from page XI*)

texts is a notable one, and equal to that of the more numerous American geographers on their own country. There are, however, at least three more books that should be written. One is a physical geography of Canada, describing in one book the distribution patterns of our landforms, climate, vegetation, soils and drainage. These topics have been discussed and described by various specialists, but no one has yet put all of the information together, stressing their interrelationships. Since these patterns of physical geography change very little, such a book would become a standard reference for all geographers around the world wishing information on Canada.

A second book needed is a new economic geography of Canada. Canadian resource potential and development are expanding so rapidly that even Canadians are continually being amazed by new discoveries. Geographers have heard of some of these resource developments, and special articles have been written on particular industries, but a task still remains for someone to bring it all together with the geographer's viewpoint of environmental factors, distribution patterns, and significance of location.

A third useful book would be one on the geography of Canadian settlement. Such a book should include the environmental factors that have played a part in Canada's settlement history (as have been described by Canadian historians and economists) but should continue by discussing the growth and resource-base of modern Canadian cities.

Canadian geographers, there is work to be done!

* * *

Books mentioned in Dr. Robinson's article:

AN ECONOMIC GEOGRAPHY OF CANADA. By A. W. Currie. Macmillan, Toronto, 1947 edition, $6.50.

CANADA—A STUDY IN COOL CONTINENTAL ENVIRONMENTS. By Griffith Taylor. Methuen; 1950 edition, British Book Service, Toronto, $5.00.

THE GEOGRAPHY OF CANADA. By J. L. and M. J. Robinson. Longmans, Green, Toronto, 1950, $2.75.

CANADIAN REGIONS. By Donald F. Putnam and others. Dent, Toronto, 1952, $9.00.

REGIONAL GEOGRAPHY OF ANGLO-AMERICA. By L. White and E. Foscue. Prentice-Hall, New York, 1954 edition, $7.50.

UNITED STATES AND CANADA—AN ECONOMIC GEOGRAPHY. By A. J. Wright. Appleton-Century-Crofts, New York, 1948.

GEOGRAPHY OF NORTH AMERICA. By George J. Miller, A. E. Parkins and Bert Hudgins. Wiley, New York, 1954, $7.50.

Professional Advice

A professional man . . . a dentist . . . as a matter of fact . . . came in to see us the other day.

He told us that he needed some investment advice, and from what he'd heard of us, he felt we were the people who could help him. "You know," he said, "if you had something wrong with your teeth I'd expect you to come to me . . . or to someone like me qualified to give you good professional advice. Well right now, I need some professional advice about investments. That's why I've come to see you."

We sat down and discussed his problem. It turned out he had a good practice . . . had no dependents other than his wife . . . and he already had arranged a modest retirement program. But he was still practicing and had accumulated funds which he felt, if properly invested, would permit him to add to his retirement fund. He wasn't interested in taking risks . . . he just wanted good sound investments.

We put some thought on it and came up with a program that we felt was best for him. Here was a professional man who wanted professional advice. He had come to us because he felt we were capable of giving it to him.

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